SAN DIEGO COUNTY HAZARDOUS FUELS REDUCTION PROJECT
GREATER JULIAN (WHISPERING PINES AND SR 78-79 CORRIDOR) AREA
Biological Resources Report

Revised October 20, 2010
June 30, 2010

Prepared for:

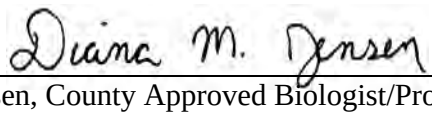
Environmental Resource Solutions, Inc.
Contact: Ms. Bonnie Burchill
P.O. Box 592
Julian, CA 92036
Phone: (760) 765-1331
E-mail: bburchill@eresourcesolutions.com

and

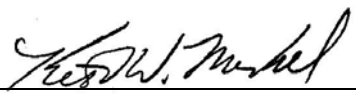
County of San Diego
Contact: Mr. Tom Oberbauer
5201 Ruffin Road, Suite B
San Diego, CA 92123-1666
Phone: (858) 694-3701
E-mail: tom.oberbauer@sdcounty.ca.gov

Prepared by:

Merkel & Associates, Inc.
Contact: Diana Jensen
5434 Ruffin Road
San Diego, California 92123
Office: (858) 560-5465
Direct/Cell: (619) 884-5524
E-mail: djensen@merkelinc.com



Diana M. Jensen, County Approved Biologist/Project Manager



Keith W. Merkel, County Approved Biologist/Principal Consultant

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

GLOSSARY OF TERMS AND ACRONYMS

ACOE	Army Corps of Engineers
AMSL	above mean sea level
APN	Assessors Parcel Numbers
CEQA	California Environmental Quality Act
CDFG	California Department of Fish and Game
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
County	County of San Diego
EIR	Environmental Impact Report
ERS	Environmental Resource Solutions, Inc.
ESA	Endangered Species Act
ESRI	Environmental Systems Research Institute
FP	Fully Protected species
GIS	Geographical Information System
GPS	Global Positioning System
M&A	Merkel & Associates, Inc.
MBTA	Migratory Bird Treaty Act
MMU	minimum mapping unit
MSCP	Multiple Species Conservation Program
Project	San Diego County Hazardous Fuels Reduction Project
RPO	Resource Protection Ordinance
SSC	Species of Special Concern
SR	State Route
STA	Special Treatment Areas
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WLPZ	CalFire watercourse and lake protection zones
WL	Watch List species

SUMMARY OF CONCLUSIONS

Merkel & Associates, Inc. (M&A) has prepared this biological resources report for the San Diego County Hazardous Fuels Reduction Project (Project), Greater Julian [Whispering Pines and State Route 78-79 Corridor] Area. The purpose of this report is to document the existing biological conditions within the project study area; identify potential impacts to biological resources that could result from implementation of the proposed project; and recommend measures to avoid significant impacts consistent with the California Environmental Quality Act (CEQA) (14 CCR §15000 et seq. as codified at Cal. Pub. Res. Code §21000 et seq.), as well as applicable federal, state, and local regulations and guidelines, including the County of San Diego (County) Resource Protection Ordinance (RPO) (2007) and Report Format and Content Requirements and Guidelines for Determining Significance [for] Biological Resources, Third Revision (County 2009b and c).

The majority of the Project Area consists of oak woodland, coniferous forest and chaparral habitat, with smaller inclusions of riparian vegetation along watercourses and grasslands and meadows in the openings of the woodland and forest habitat. The wetland habitats and mafic northern mixed chaparral present within the Project Area are considered County RPO Sensitive Habitat Lands.

No federal or state listed endangered or threatened species were identified within the Project Area; however, potentially suitable habitat for the state listed bald eagle (*Haliaeetus leucocephalus*) is present surrounding Cuyamaca Reservoir. A total of three special status floral species and seven special status faunal species were detected during the 2010 biological surveys on the Assessor Parcel Numbers (APNs)/operation units designated for fuel reduction: southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*) (APN 407-100-50), bluish-spike moss (*Selaginella asprella*) (APNs 250-020-08, 250-111-08, 250-150-01 and 16), golden violet (*Viola aurea*) (APNs 250-150-01, 15 and 248-060-33), red-shouldered hawk (*Buteo lineatus*) (general Project Area), turkey vulture (*Cathartes aura*) (general Project Area), mountain quail (*Oreortyx pictus*) (general Project Area), purple martin (*Progne subis*) (APN 294-012-20), western bluebird (*Sialia mexicana*) (general Project Area), southern mule deer (*Odocoileus hemionus fuliginata*) (general Project Area), and mountain lion (*Puma concolor*) (general Project Area).

In addition, a total of nine wildlife trees were designated on APNs 250-111-06, 250-150-23, 291-160-14, 294-012-19, 20, and 32, and 294-030-03. These trees have been flagged with "do-not-cut" tape because they provide unique wildlife nesting sites, perching locations/snags, and/or areas for denning/cover not found in the adjacent live trees in the surrounding parcel areas.

There is general consensus that tree densities in Southern California forests are greater than what would exist under natural conditions and this combined with drought has caused mortality of forest trees (Keeley et al. 2004 and Minnich et al. 1995). Tree density and the effects of drought also contributed to the loss of forest trees in the Cuyamaca Mountains during the 2003 fires (Keeley et al. 2009; Goforth and Minnich 2008; Oberbauer 2007; Franklin et al. 2006). Furthermore, previous programs to remove dead, dying and diseased trees have been identified as assisting in the prevention of the destruction of the Palomar Mountain forests during the Poomacha Fire in 2007 (Thom Porter 2008, CAL FIRE pers. com.; George Lucia 2008, Palomar Volunteer Fire Department Chief and Valley Center Fire District Fire Marshal who participated in fighting the Poomacha fire on Palomar Mountain, pers. com.). Tree removal under the Dead, Dying and Diseased Tree Removal Program would occur in forested and urban areas, thus the woodland and forest habitat within the vicinity of existing urban structures would incur permanent, direct change. Due to the impacts and extreme fire

hazard to forests and properties from unnaturally dense forests, the action to remove dead and dying trees would be considered positive. There may be temporary, localized effects from Project fuel modification activities (i.e., strategic dead tree removal); however, the removal of dead trees in an overly dense and highly flammable environment may be considered a positive impact.

Implementation of the following avoidance measures would avoid potential adverse effects on special status species, riparian habitat or sensitive natural communities, and wildlife movement to a level less than significant under CEQA, and ensure compliance with the regulatory requirements of the Federal Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act and California Fish and Game Codes §3503 and §3513.

1) All trees located within areas identified through the biological surveys or through review by U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) staff to support sensitive species of plants and animals under the County list of sensitive species will be eliminated from the program and left in an undisturbed state.
2) If a designated wildlife tree were subsequently determined to be a hazard tree, the wildlife value of the tree will be assessed by the USFWS and CDFG to determine if the tree should not be cut.
3) All trees marked for removal shall be inspected (including branches and cavities) by a qualified biologist for the presence of active nests immediately prior to felling, and if an active nest is detected, then removal of the tree(s) shall be avoided until after the breeding season, which is defined (County 20009b) as February 15th to August 31st.
4) The operator shall inspect all equipment and remove the propagules of weed species prior to entering the Project Area in accordance with the USFS Guide to Noxious Weed Prevention Practices.
5) All vehicles and heavy equipment shall remain within pre-existing roads, trails, and parking areas to the extent practical.
6) All trees marked for removal along grassland and meadow edges, or intergraded within scrub or chaparral habitat shall be felled away from these habitats (where feasible), with logs removed (e.g., skid trails) through the least biologically sensitive area(s).
7) All tree removal shall follow WLPZ limitations and procedures in the California Forest Practice Rules.
8) All temporary routes, landings and skid trails shall be rehabilitated and blocked after Project completion, using a combination of natural barriers (e.g., rocks, logs, etc.) and/or signage; and all existing fences or barriers should be repaired to prevent/discourage unauthorized vehicle activity during and after Project treatment.

1.0 INTRODUCTION

1.1. Purpose of the Report

Merkel & Associates, Inc. (M&A) has prepared this biological resources report for the San Diego County Hazardous Fuels Reduction Project (Project), Greater Julian [Whispering Pines and State Route (SR) 78-79 Corridor] Area. The purpose of this report is to document the existing biological conditions within the project study area; identify potential impacts to biological resources that could result from implementation of the proposed project; and recommend measures to avoid, minimize, and/or mitigate significant impacts consistent with the California Environmental Quality Act (CEQA) (14 CCR §15000 et seq. as codified at Cal. Pub. Res. Code §21000 et seq.), as well as applicable federal, state, and local regulations and guidelines, including the County of San Diego (County) Resource Protection Ordinance (RPO) (2007) and Report Format and Content Requirements and Guidelines for Determining Significance [for] Biological Resources, Third Revision (County 2009b and c).

1.2. Project Location and Description

The San Diego region has been devastated by two major firestorms, in October 2003 and 2007, as well as over 50 other smaller wildfires that burned more than 100 acres each in the past 10 years, which resulted in loss of human life, destroyed animals, livestock and hundreds of homes and businesses, and forced the evacuation of tens of thousands of people (County 2009a and pers. com.). In the forested area of the County, hazardous conditions are largely due to imminent fire danger caused by the extraordinary number of dead, dying, and diseased trees resulting from prolonged drought, overstocked forests, and infestation by bark and boring beetles and other decaying organisms.

There is general consensus that tree densities in Southern California forests are greater than what would exist under natural conditions and this combined with drought has caused mortality of forest trees (Keeley et al. 2004 and Minnich et al. 1995). Tree density and the effects of drought also contributed to the loss of forest trees in the Cuyamaca Mountains during the 2003 fires (Keeley et al. 2009; Goforth and Minnich 2008; Oberbauer 2007; Franklin et al. 2006). Furthermore, previous programs to remove dead, dying and diseased trees have been identified as assisting in the prevention of the destruction of the Palomar Mountain forests during the Poomacha Fire in 2007 (Thom Porter 2008, CAL FIRE pers. com.; George Lucia 2008, Palomar Volunteer Fire Department Chief and Valley Center Fire District Fire Marshal who participated in fighting the Poomacha fire on Palomar Mountain, pers. com.).

On March 7, 2003, a State of Emergency Proclamation was declared in the State of California declaring extreme peril from imminent fire danger caused by dead, dying, and diseased trees and vegetation. On May 9, 2007 and 2008, the Governor issued Executive Orders making reference to this continuing situation.

San Diego County continues to be threatened by very high fire risk as evidenced by these recent major fires and required evacuations. Removal of these dead, dying, and diseased trees along evacuation corridors is required in order to minimize the loss of life and property in the next wildfire event, and is necessary to prevent or mitigate a wildfire emergency. The removal of dead, dying, and

diseased trees will occur within the Wildland Urban Interface areas and the Fire Hazard Severity Zones of San Diego County where the risks of imminent fires are most severe.

The Project covers the unincorporated portions of San Diego County, and involves the acceptance of grant funds from the United States Department of Agriculture, Forest Service (USFS) for the removal of dead, dying, and diseased trees within 500 feet of evacuation corridors and habitable structures. The identification and removal of trees is conducted with the oversight of a registered forester, and removal of trees will be conducted pursuant to 14 CCR 1038(b) of the California Forest Practice Rules (CalFire 2010).

This report addresses a portion of the Greater Julian Project Area (i.e., Whispering Pines and SR 78-79 Corridor) located in an unincorporated region of eastern San Diego County within: Sections 1, 5, 6, 9, 15, 16, 22, 26, 27, 29, 31, 32 and 35 of Township 12, 13, 14 and 15 South, Range 3 and 4 East of the San Bernardino Base and Meridian, U.S. Geological Survey (USGS) Santa Ysabel, Julian, Cuyamaca Peak and Descanso, California Quadrangles (Figure 1). This report encompasses private property within the Whispering Pines community and along SR 79 from the SR 78-79 junction south to the Cleveland National Forest (not including Cuyamaca Rancho State Park), and includes the Assessors Parcel Numbers (APN) noted below with a right-of-entry and trees marked for removal.

Whispering Pines:

- 250-020-03, 05, 07, 08, 10, 14, 18 and 19;
- 250-080-45;
- 250-100-02, 06, 07, 13, 16, 17, 18, 19, 24 and 25;
- 250-110-03, 22, 35, 38, 39 and 43;
- 250-111-04, 05, 06, 07 and 08;
- 250-120-28, 72, 81, 84 and 85;
- 250-130-03, 09, 15, 22 and 23;
- 250-150-01, 02, 07, 09, 15, 16, 18, 19, 21 and 23;
- 250-161-01 and 12;
- 205-162-08, 14 and 16;
- 250-163-02, 07, 09, 10, 14, 15 and 24;
- 250-164-13, 19 and 24;
- 250-170-01, 03 and 05;
- 250-180-19, 20 and 30;
- 250-200-01, 07 and 08;
- 250-202-01, 03, 06, 09, 10, 12, 15, and 16;
- 250-203-01, 02 and 07;
- 250-204-02, 03, 05 and 10;
- 250-205-01, 06, 07 and 08;
- 250-206-03, 07, 08, 11 and 15;
- 205-207-03, 07, 08, 09, 10, 12, 13, 14, 15, 17 and 18;
- 205-208-01, 05, 14 and 26;
- 250-209-01, 02 and 04;
- 250-211-01, 03, 04, 05, 07, 14, 25, 26, 27, 28, 30, 40 and 42;
- 250-212-07, 09, 10, 12, 13, 16, 18, 19, 42 and 51;
- 250-213-03, 04 and 05;
- 250-214-02, 04, 06 and 24;

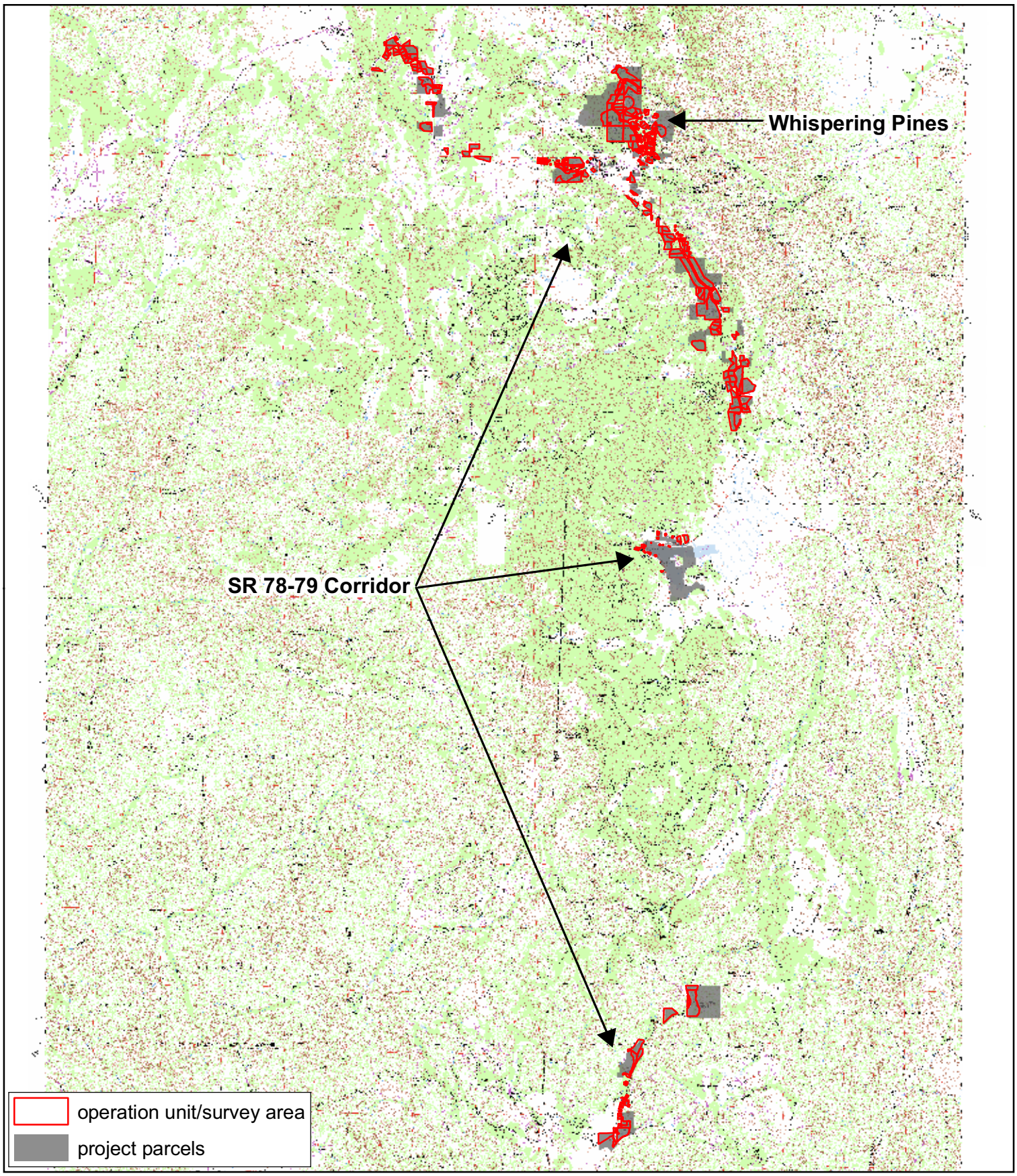
- 250-220-02;
- 291-122-17;
- 291-131-06;
- 291-150-02, 03, 04, 06 and 10;
- 291-160-08 and 014;
- 291-370-08 and 27;
- 291-380-07; and
- 291-420-01.

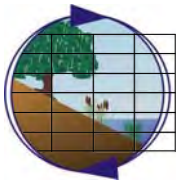
SR 78-79 Corridor:

- 248-050-03, 06, 15, 21, 22, 23 and 25;
- 248-060-01, 03, 10, 11, 14, 15, 23, 26, 33 and 34;
- 248-160-02, 06, 20 and 28;
- 248-180-22 and 27;
- 248-190-15 and 23;
- 248-210-02 and 03;
- 248-230-08, 09, 11, 13, 15, 17, 20 and 22;
- 248-241-01, 02, 03 and 05;
- 248-242-05;
- 250-070-09;
- 289-060-01;
- 291-010-12, 16, 17, 18, 19, 20, 21 and 26;
- 291-022-01, 02, 05 and 06;
- 291-023-02, 09, 10, 24, 26, 28, 29, 30, 31 and 32;
- 291-032-01, 02, 03, 04 and 05;
- 291-040-01, 07, 09, 10, 27, 32, 33, 34, and 51;
- 291-072-09;
- 291-121-12;
- 291-122-11;
- 291-170-18, 30 and 31;
- 291-171-09, 10 and 12;
- 292-011-29, 30, 33 and 34;
- 292-041-27 and 28;
- 292-042-04, 07, 08, 09, 15, 17, 18, 19 and 20;
- 292-051-19, 27, 34 and 35;
- 292-054-41, 44, 45, 48 and 49;
- 292-055-01, 28 and 29;
- 292-056-04 and 09;
- 292-057-05;
- 292-058-03 and 04;
- 292-079-11, 12, 13 and 14;
- 292-140-09, 10, 29, 30, 39, 40 and 41;
- 292-141-03, 06, 10, 36 and 37;
- 292-150-29;
- 292-151-27;
- 294-011-52, 55, 60 and 75;

- 294-012-02, 03, 09, 13, 18, 19, 20, 21, 22, 25, 28, 29 and 32;
- 294-030-03;
- 294-070-27 and 47;
- 294-094-18;
- 294-096-01;
- 294-180-01, 03, and 18;
- 335-010-21, 25 and 29;
- 335-020-05 and 06;
- 335-030-09 and 11;
- 407-050-08, 13 and 18;
- 407-051-03;
- 407-100-36, 45, 49 and 50;
- 407-111-11 and 13;
- 407-112-02, 06, 07, 10, 11, 13, 14, 15 and 16;
- 407-121-06, 17 and 21;
- 407-122-16 and 17;
- 407-130-09, 18, 20 and 23;
- 408-080-06, 07, 08, 09, 47, 49 and 65;
- 408-081-11 and 12; and
- 408-090-05, 06, 07 and 08.

This report represents fuel reduction on 375 parcels, including either the entire parcel or a portion of the parcel (i.e., operation unit) totaling approximately 1,216 acres, with approximately 15,700 trees assessed for removal (Burchill 2010, pers. com.).





N
W E
S

1:130,000

Project Vicinity Map

San Diego County Hazardous Fuels Reduction Project
Greater Julian Project Area

Source: USGS 7.5' Santa Ysabel, Julian,
Cuyamaca Peak, & Descanso, CA Quadrangles

Figure 1

1.3. Survey Methodologies

Literature and Data Review

Historical and currently available biological literature and data pertaining to the project area were reviewed prior to initiation of the field investigation. This review included examination of: 1) aerial photograph map books for the project area, provided by Environmental Resource Solutions, Inc. (ERS); 2) geological substrates and soil types mapped on the project parcels/operation units (USGS 2005 and USDA NRCS 2007, respectively); 3) regional vegetation data for the project vicinity (SanGIS 2007a); 4) watercourse and lake protection zones (WLPZ) within the project parcels/operation units, mapped and provided by ERS, according to California Forest Practice Rules (CalFire 2010); 5) federally designated critical habitat for the project vicinity (USFWS 2010b); and 6) California Department of Fish and Game (CDFG) California Natural Diversity Database (CNDDB) and U.S. Fish and Wildlife Service (USFWS) special status species records for the project vicinity (CDFG 2009a and USFWS 2010a, respectively).

Field Reconnaissance

M&A biologists conducted on-foot, informed reconnaissance-level biological surveys (surveys to observe presence of sensitive species with potential to occur in the areas) of the entire parcels or operation units identified for fuel reduction within the project area. ERS provided the parcel and operation unit boundaries, which were downloaded into Trimble® geoexplorer Global Positioning System (GPS) units with submeter accuracy prior to the surveys in order to locate and navigate through the survey areas. Photographs were taken to record the existing biological resources present, and data collected from the surveys were digitized into current Geographical Information System (GIS) Environmental Systems Research Institute (ESRI) software platforms.

Vegetation Field Truthing

M&A biologists noted the vegetation types present on each parcel/operation unit during the biological surveys on field data sheets. This information was then compared to the regional vegetation mapping GIS layer from SanGIS (2007a), and any noted changes were delineated in accordance with the County Biological Resource Mapping Guidelines (County 2009c). Since the vegetation field truthing was conducted on a larger, more regional scale, some vegetation communities may not have been represented individually but were included as part of the larger surrounding vegetation community. The vegetation types were classified according to the Holland (1986) code classification system as modified by Oberbauer (2008) and were mapped in accordance with the County of San Diego biological resource mapping requirements (2009c).

Flora/Fauna Survey

M&A biologists also noted dominant flora and fauna species on the parcels/operation units during the biological surveys and recorded a list of common, detectable species on field datasheets. Plant identifications were either resolved in the field or later determined through verification of voucher specimens. Wildlife species were determined through direct observation (aided by binoculars), identification of songs, call notes and alarm calls, or by detection of sign (e.g., burrows, tracks, scat, etc.). GPS waypoints were taken for trees noted as "wildlife trees," defined for the purposes of this report as "trees providing unique nesting, perching/snag, den/area of cover not found in the adjacent

live trees;" these trees were further photographed and flagged with "do-not-cut" tape. The scientific and common names utilized for the floral and faunal resources identified were noted according to the following nomenclature: flora, Rebman and Simpson (2006); butterflies, Klein and San Diego Natural History Museum (2002) and Opler et al. (2010); amphibians and reptiles, Crother et al. (2001 and 2003); birds, American Ornithologists' Union (1998 and 2009); and mammals, (species level) Wilson and Reeder (2005) and (sub-species level) Hall (1981).

Directed Special Status Species Survey/Assessment

Concurrent with the vegetation field truthing and flora/fauna survey, M&A biologists conducted a directed survey/assessment of the parcels/operation units for special status species. The species list considered in the assessment was based on those special status species, as defined a under the California Environmental Quality Act (CEQA), with the presence of potentially suitable habitat in the project area.

State CEQA Guidelines §15380 (Title 14, Chapter 3, Article 20) define "endangered, rare or threatened species" as "species or subspecies of animal or plant or variety of plant" listed under the Code of Federal Regulations, Title 50, Part 17.11 or 17.12 (Volume 1, Chapter I) or California Code of Regulations, Title 14, Sections 670.2 or 670.5 (Division 1, Subdivision 3, Chapter 3), or a species not included in the above listings but that can be shown to be "endangered," meaning "when its survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors" or "rare" meaning "although not presently threatened with extinction, the species is existing in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens or the species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered 'threatened' as that term is used in the Federal Endangered Species Act". State CEQA guidelines Appendix G, Section IV generally refers to species that fall under the above criteria as "special status species".

The County Report Guidelines for Determining Significance [for] Biological Resources (2009b) define "sensitive species" as "those species that are included on generally accepted and documented lists of plants and animals of endangered, threatened, candidate or of special concern by the Federal Government or State of California; MSCP Rare, Narrow Endemic Animal Species, Narrow Endemic Plant Species, and County Sensitive Plant and Animal Species; and those species that meet the definition of 'Rare or Endangered Species' under §15380 of the State CEQA Guidelines."

Thus, for the purposes of this report, special status species are: 1) federally and state listed species (CDFG 2010b and d); 2) CDFG Species of Special Concern (SSC), Fully Protected (FP), and Watch List (WL) species (CDFG 2009c and 2010c); 3) species designated as Special Plants or Special Animals in the CNDDB, which include all taxa inventoried by the CDFG, regardless of their legal or protection status; and 4) species designated as sensitive by the County (County 2009d).

The location of identified special status species were noted on field data sheets and recorded using a Trimble® geoexplorer GPS unit, and as feasible, the number and density of individuals was noted. The potential for special status species to occur within the project area, but not identified during the surveys, was assessed based on the presence of potentially suitable habitat, as well as historical and currently available species data. The potential for species presence was classified as follows:

- Not Expected: species not previously reported within two miles of the project area and with limited potentially suitable habitat;
- Low Potential: species previously reported within two miles of the project area but with limited potentially suitable habitat;
- Moderate Potential: species previously reported within two miles of the project area but with only moderate quality, potentially suitable habitat due to habitat disturbance, fragmentation, or isolation; and
- High Potential: species previously reported within two miles of the project area with large areas of contiguous, high quality, potentially suitable habitat present.

Survey Dates, Times, and Conditions

The biological surveys were conducted during the months of April, May, and June 2010. Appendix 1 provides a table summarizing the survey dates and conditions.

Survey Limitations

Biological inventories are generally subject to various survey limitations. Depending on the season and time of day during which field surveys are conducted, some species may not be detected due to temporal species variability.

Multiple daytime field surveys of the parcels/operation units were conducted over a period of three months during the spring/summer seasons when annual plants, invertebrates, amphibians, reptiles, and migratory or nesting birds are more easily detected; however, documentation of some habitats and species may have been limited by the following constraints:

- Each parcel/operation unit was surveyed only once in order to evaluate the biological conditions present and assess the potential for special status species;
- Portions of the parcels/operation units were inaccessible by foot due to very dense vegetation and steep slopes;
- Nighttime or trapping surveys for crepuscular or nocturnal wildlife were not conducted;
- While surveys for sensitive species were conducted on-foot during the spring/summer seasons when species are more easily detected, the surveys did not involve repeat visits or follow specific survey regimen that may exist for a few of the species that may occur in the study area; and
- All wetland habitats (WLPZs) were identified and mapped by ERS and thus delineated by M&A. The WLPZs and will be avoided in accordance with section 4562.7 of the California Forest Practice Rules.

The following measures were implemented to compensate for these survey limitations:

- The portions of the parcels/operation units that were inaccessible by foot were surveyed by binoculars from advantageous viewpoints; and
- Biological literature and data reviews were performed to assess the potential presence of habitats and species within the project area.

Based on the information above, it is believed that the biological literature and data reviews performed and field surveys conducted were sufficient in obtaining a reconnaissance-level review of the biological resources present on the parcels/operation units and assessing the potential for substantial population presence of special status species in order to identify special treatment areas and avoid significant impacts to potentially occurring sensitive species.

1.4. Existing Biological Conditions

1.4.1. Regional Context

The Greater Julian Project Area is located in the central mountains ecoregion of San Diego County within the proposed future East County Multiple Species Conservation Program (MSCP) Subarea (SanGIS 2003a and County of San Diego 2010, respectively). None of the project parcels are located within federally designated critical habitat (USFWS 2010b). The Cleveland National Forest is situated to the west and south of the project parcels; Cuyamaca Rancho State Park is located along the SR 78-79 Corridor, with Anza-Borrego Desert State Park located towards the east (SanGIS 2003d) (Figure 2).

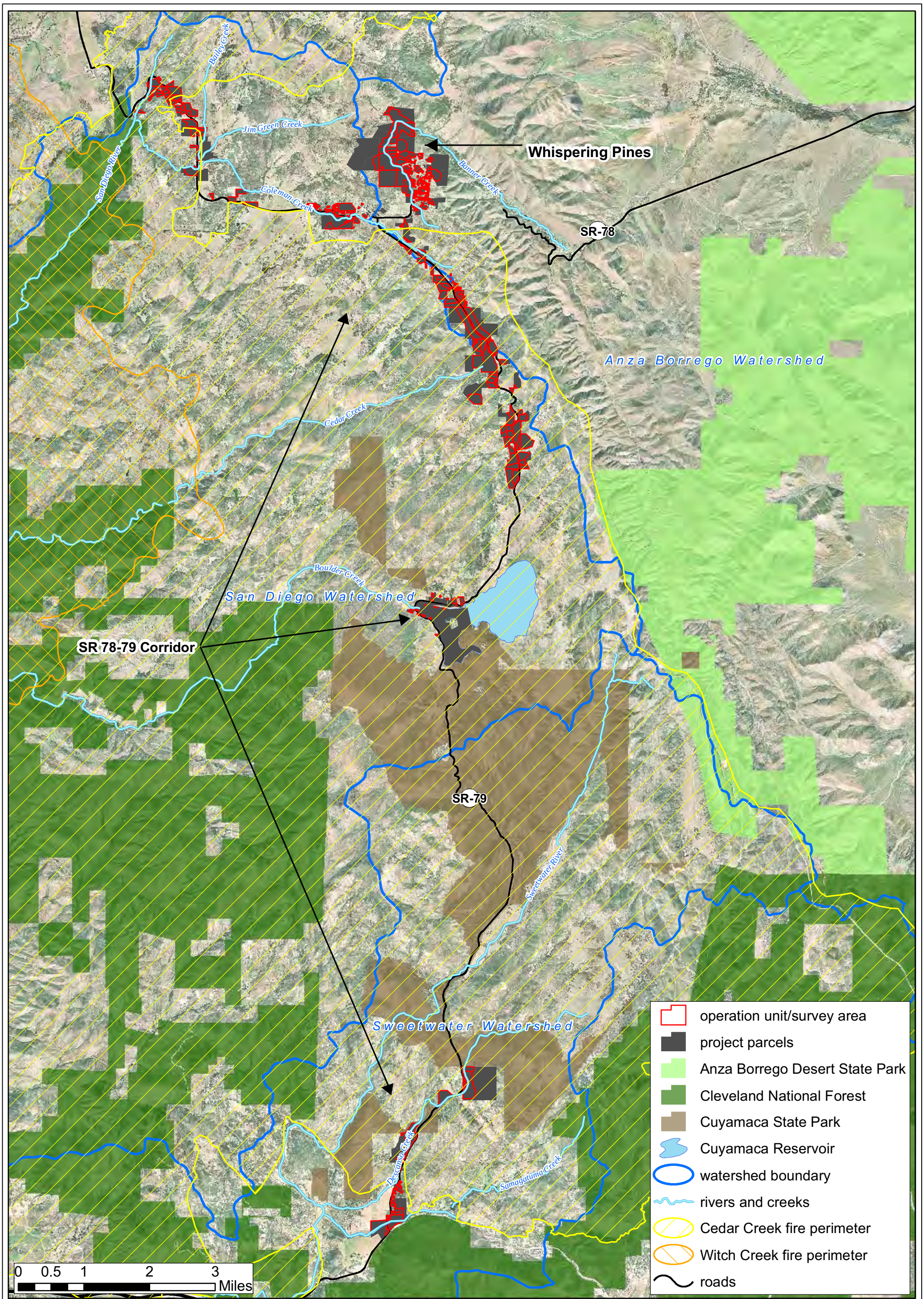
The project parcels are located within three watersheds: the Anza Borrego, San Diego River, and Sweetwater watersheds (SanGIS 2003c) (Figure 2). The Whispering Pines community is located within the Anza Borrego watershed, which is an eastern flowing watershed that drains water towards the Salton Sea; Banner Creek and several small tributaries flow through the community. The northern portion of the SR 78-79 Corridor, north of Cuyamaca Rancho State Park, is located within the San Diego River watershed, which is a western flowing watershed that drains water to the Pacific Ocean via the San Diego River. The San Diego River flows through portions of the project parcels, where its headwaters originate in the Cuyamaca Mountains northwest of the town of Julian. Bailey Creek, Jim Green Creek, Coleman Creek, Cedar Creek, and Boulder Creek, which originates from the Cuyamaca Reservoir, all flow through portions of the project parcels and ultimately connect to the San Diego River towards the west. The southern portion of the SR 78-79 Corridor, south of Cuyamaca Rancho State Park, is located within the Sweetwater watershed, which is also a western flowing watershed that drains water to the Pacific Ocean via the Sweetwater River and San Diego Bay. Descanso Creek and Samagatuma Creek flow through portions of the project parcels and ultimately connect to the Sweetwater River towards the west.

The Whispering Pines community and SR 78-79 Corridor project areas range in elevation from approximately 4,000 to 5,000 feet above mean sea level (AMSL). These project areas consist of rural, single-family residences predominantly surrounded by native habitat.

Underlying geology in the Whispering Pines community and northern portions of the SR 78-79 Corridor is mapped as plutonic rock, gneiss, and pelitic and mica schist; the southern portions of the SR 78-79 Corridor are mapped predominantly as tonalite and quartz diorite, with inclusions of gabbro (USGS 2005).

Soils in both the Whispering Pines community and along the SR 78-79 corridor are mapped as Crouch stony fine sandy loam (30 to 75 percent slopes), the predominant soil type within the Whispering Pines community, Calpine coarse sandy loam (9 to 15 percent slopes), Crouch coarse sandy loam (30 to 50 percent slopes), Crouch rocky coarse sandy loam (5 to 30 percent slopes), Sheephead Rocky fine sandy loam (30 to 65 percent slopes), Holland stony fine sandy loam (5 to 30 percent slopes), Holland fine sandy loam (5 to 30 percent slopes), and loamy alluvial land; Tollhouse rocky coarse sandy loam (30 to 65 percent slopes) is also mapped along the SR 78-79 Corridor; Boomer stony loam and loam (9 to 30 percent slopes) are mapped along the middle portion of the SR 78-79 Corridor, north of Cuyamaca Rancho State Park; and Acid igneous rock land, Visalia sandy loam (0 to 9 percent slopes) and Tujunga sand (0 to 5 percent slopes) are mapped along the southern portion of the SR 78-79 Corridor, south of Cuyamaca Rancho State Park (USDA NRCS 2007).

The majority of the project parcels located along the SR 78-79 Corridor burned in the 2003 Cedar Fire, which burned land within approximately ¼ mile of the Whispering Pines community (SanGIS 2003b and 2007b) (Figure 2). Although none of the project parcels were burned during the 2007 Firestorm, the Witch Fire burned land within a few miles of the northern portion of the SR 78-79 Corridor and Whispering Pines community.



Environmental Setting Map

San Diego County Hazardous Fuels Reduction Project
Greater Julian Project Area

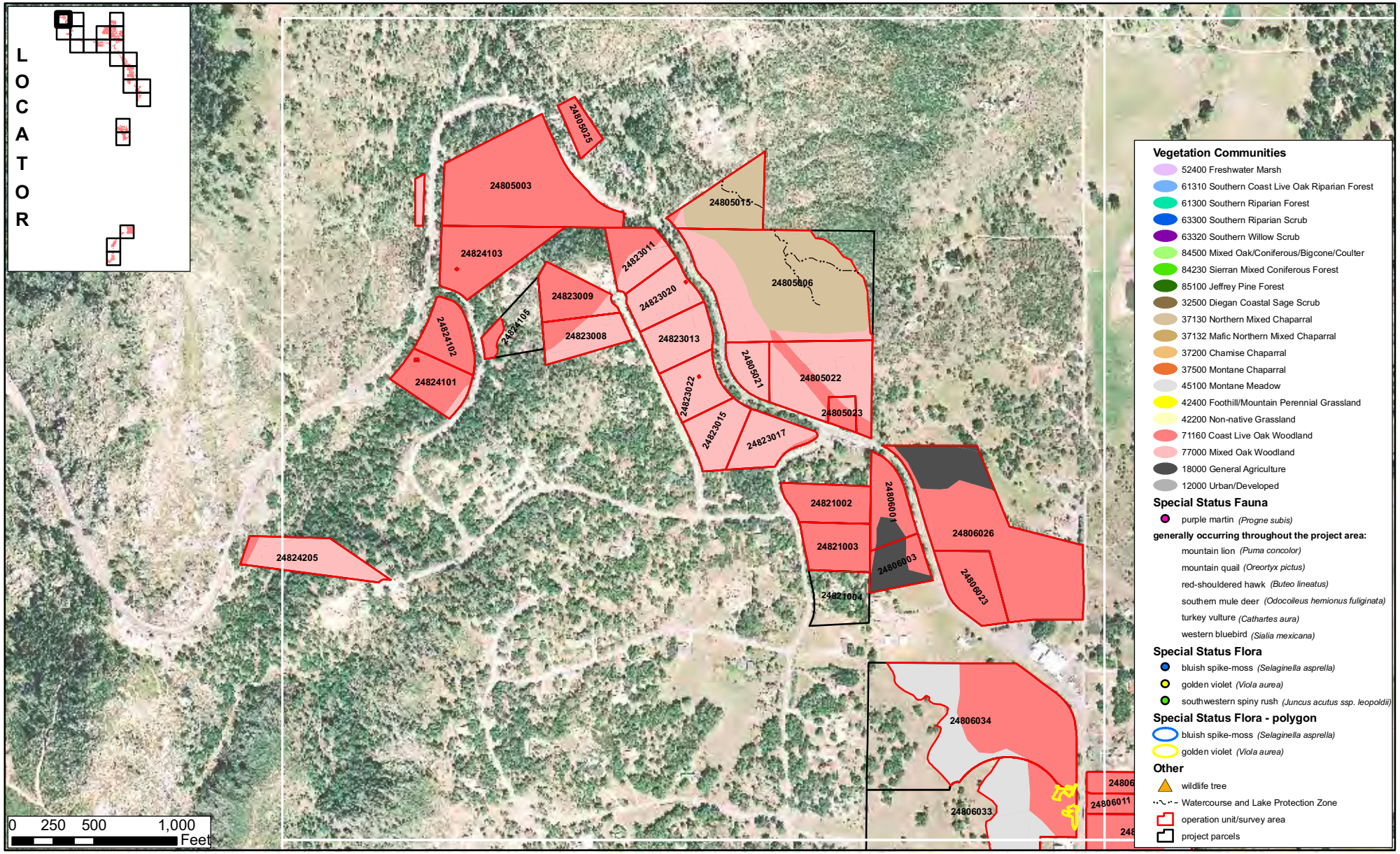
Figure 2

1.4.2. Habitat Types/Vegetation Communities

Twenty vegetation community types were identified on the project parcels/operation units during the biological surveys: urban developed, general agriculture, Diegan coastal sage scrub, northern mixed chaparral, mafic northern mixed chaparral, chamise chaparral, montane chaparral, non-native grassland, foothill/mountain perennial grassland, montane meadow, freshwater marsh, southern riparian forest, southern coast live oak riparian forest, southern riparian scrub, southern willow scrub, coast live oak woodland, mixed oak woodland, Sierran mixed coniferous forest, mixed oak/coniferous/bigcone/Coulter forest, and Jeffrey pine forest (Figures 3-1 through 3-22). Table 1 below provides a summary of the total existing acreages by vegetation type within the parcels/operation units surveyed; a detailed table stating the acreages of each existing vegetation type by APN is included in this report in Appendix 2.

Table 1. Habitats/Vegetation Communities

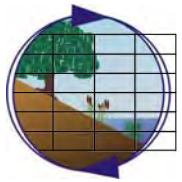
Vegetation Type	Holland/Oberbauer Code	Total Existing Acres
Urban/Developed	12000	2.3
General Agriculture	18000	26.1
Diegan Coastal Sage Scrub	32500	1.3
Northern Mixed Chaparral	37130	128.5
Mafic Northern Mixed Chaparral	37132	35.6
Chamise Chaparral	37200	4.6
Montane Chaparral	37500	12.2
Non-Native Grassland	42200	4.2
Foothill/Mountain Perennial Grassland	42400	11.3
Montane Meadow	45100	13.7
Freshwater Marsh	52400	2.6
Southern Riparian Forest	61300	11.2
Southern Coast Live Oak Riparian Forest	61310	26.9
Southern Riparian Scrub	63300	2.0
Southern Willow Scrub	63320	0.6
Coast Live Oak Woodland	71160	178.1
Mixed Oak Woodland	77000	45.7
Sierran Mixed Conifer Forest	84230	176.4
Mixed Oak/Coniferous/Bigcone/Coulter Forest	84500	526.0
Jeffrey Pine Forest	85100	8.5
	Total:	**1,217.8**



Biological Resources Map

San Diego County Hazardous Fuels Reduction Project
Greater Julian Project Area

Figure 3-1

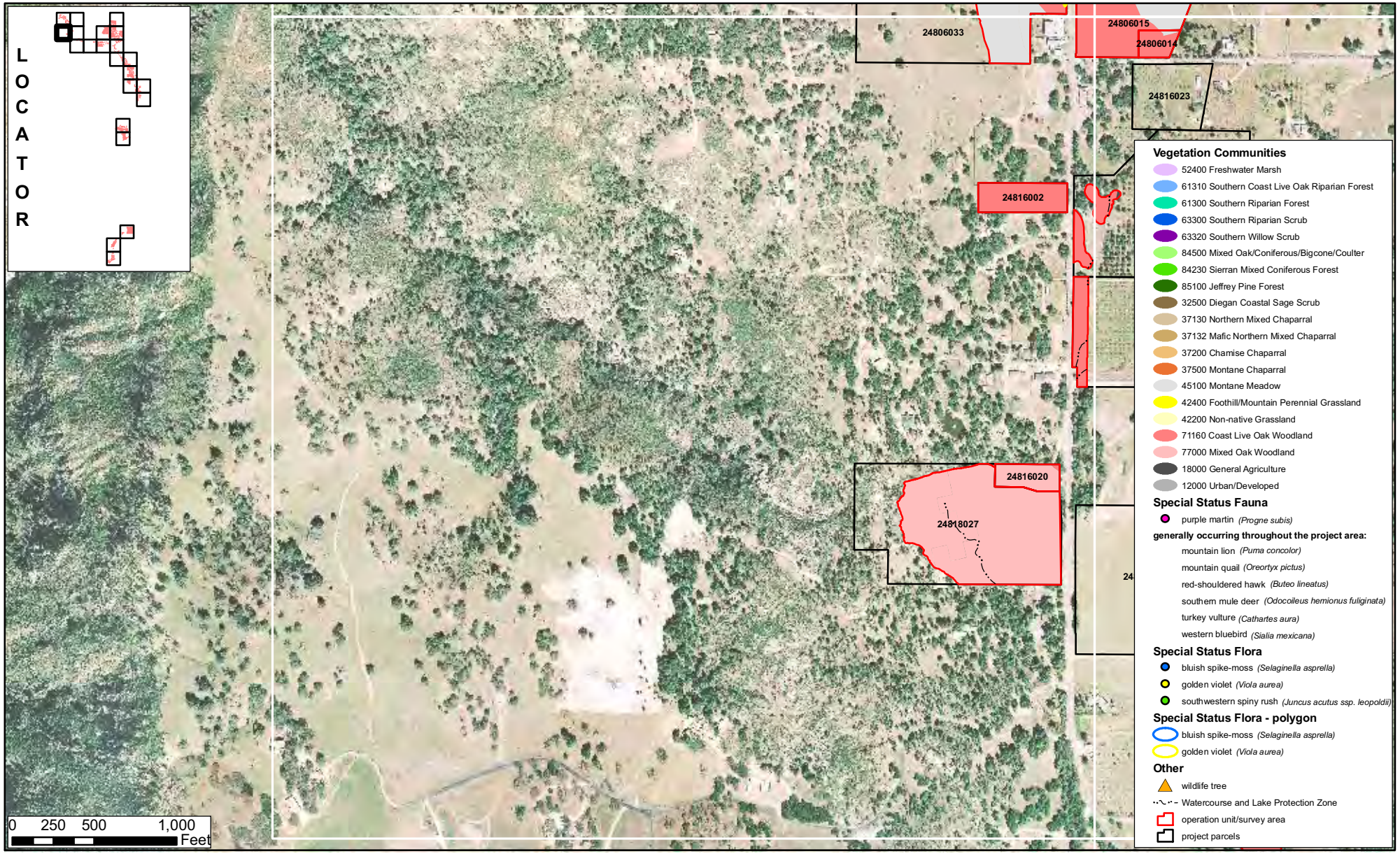


N
W E
S

Biological Resources Map

San Diego County Hazardous Fuels Reduction Project
Greater Julian Project Area

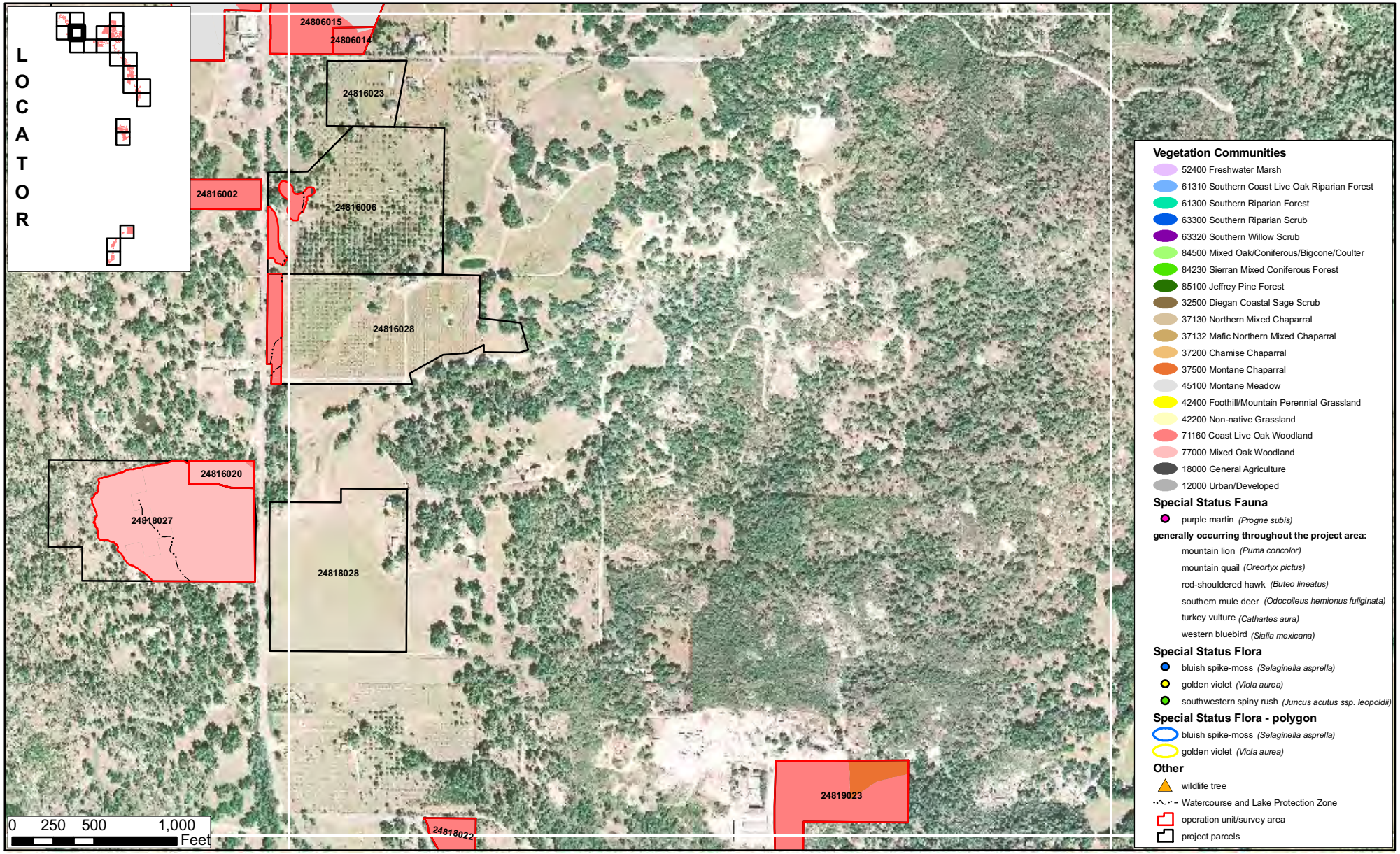
Figure 3-2

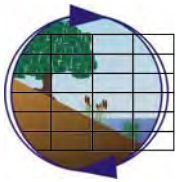


Biological Resources Map

San Diego County Hazardous Fuels Reduction Project
Greater Julian Project Area

Figure 3-3

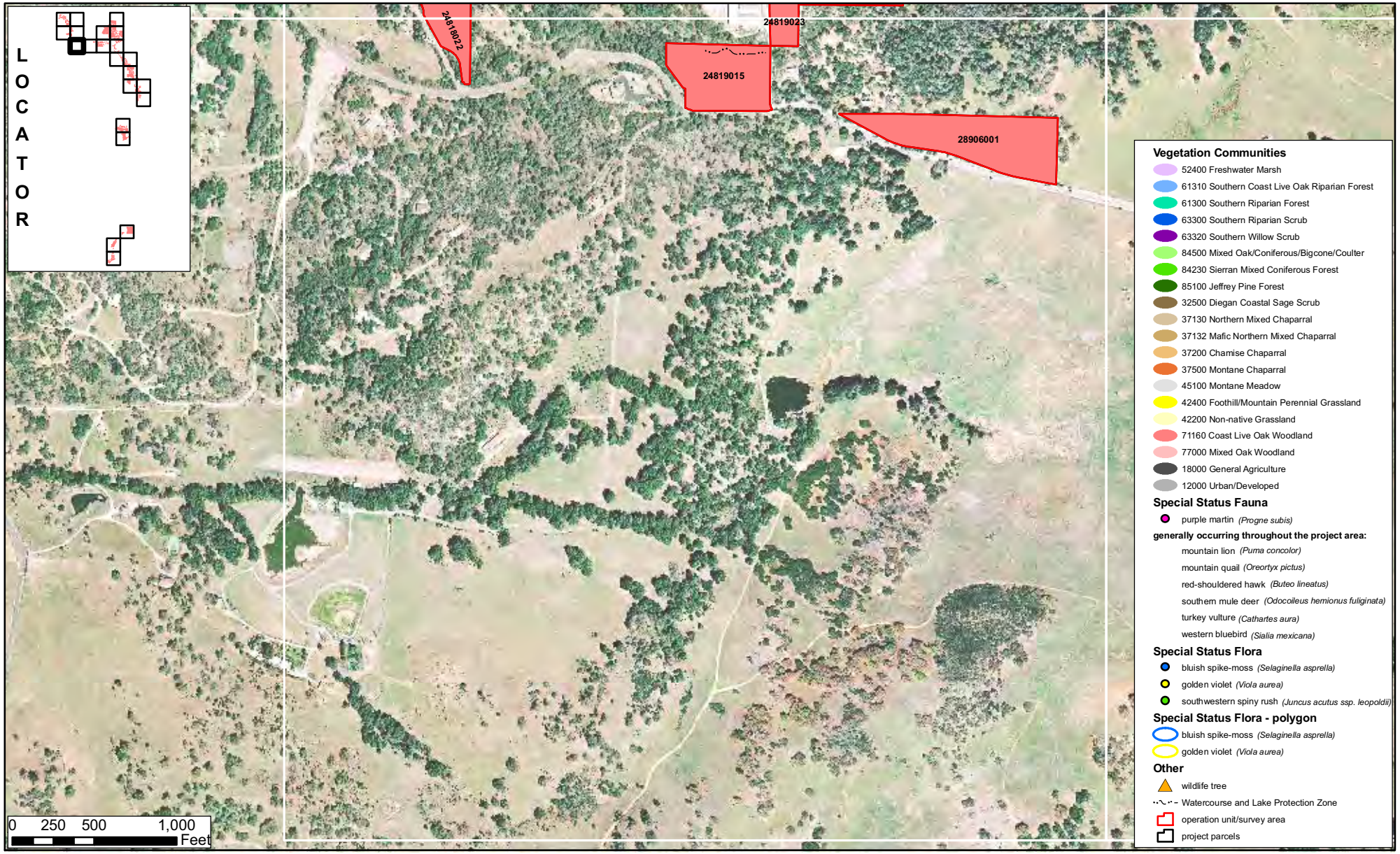




Biological Resources Map

San Diego County Hazardous Fuels Reduction Project
Greater Julian Project Area

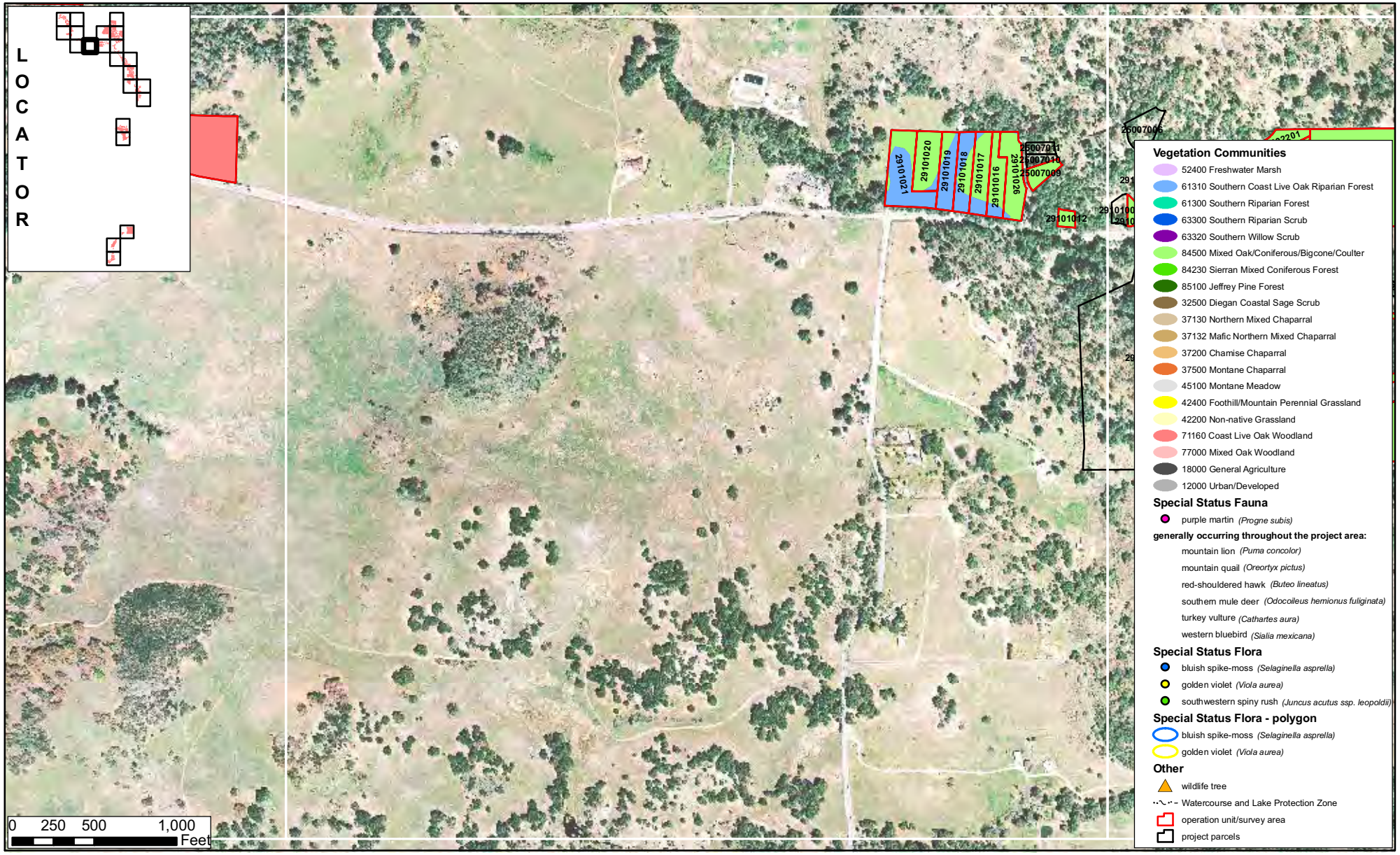
Figure 3-4

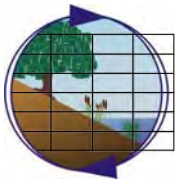


Biological Resources Map

San Diego County Hazardous Fuels Reduction Project
Greater Julian Project Area

Figure 3-5

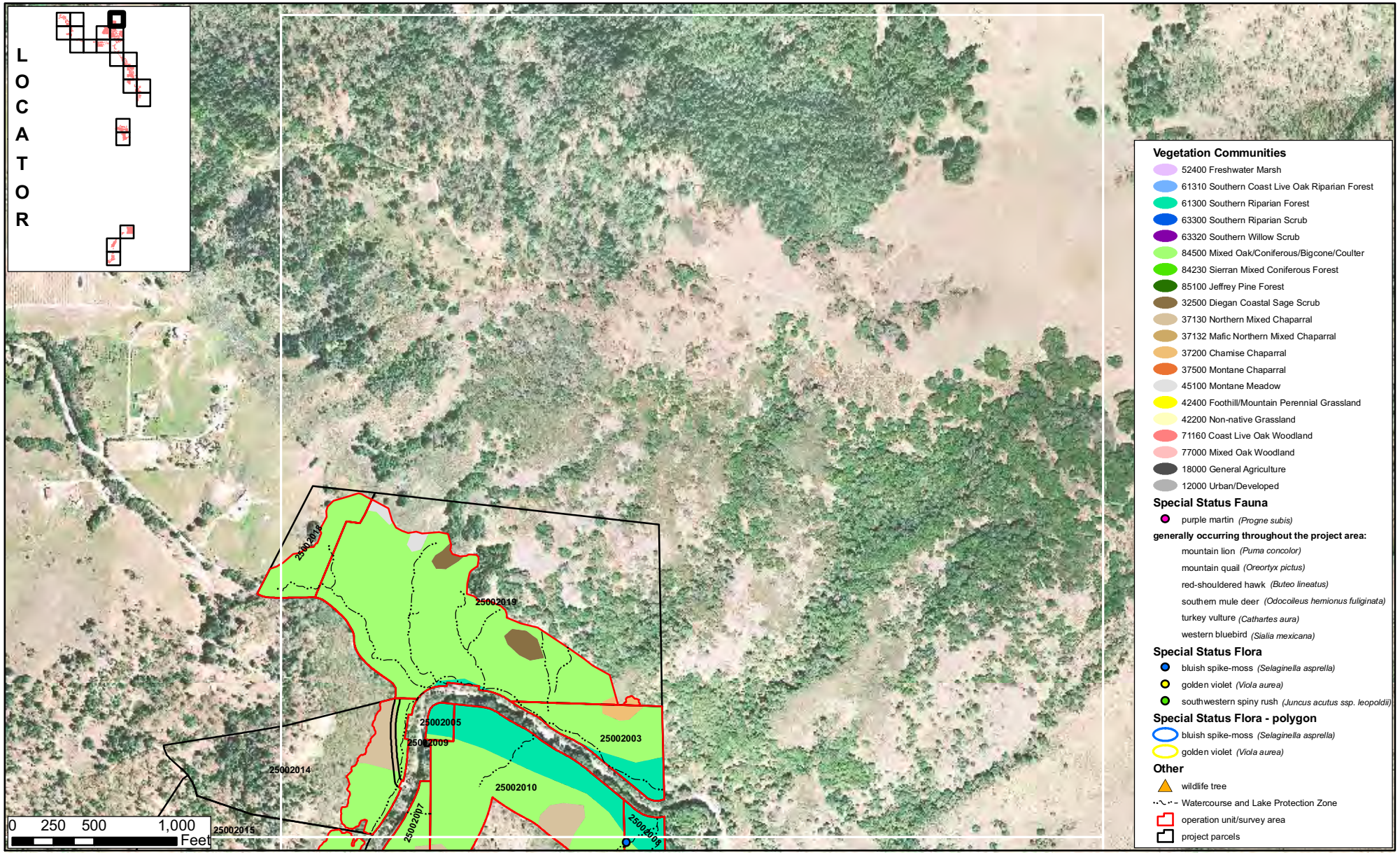


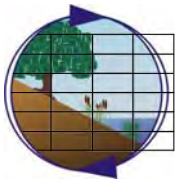


Biological Resources Map

San Diego County Hazardous Fuels Reduction Project
Greater Julian Project Area

Figure 3-6



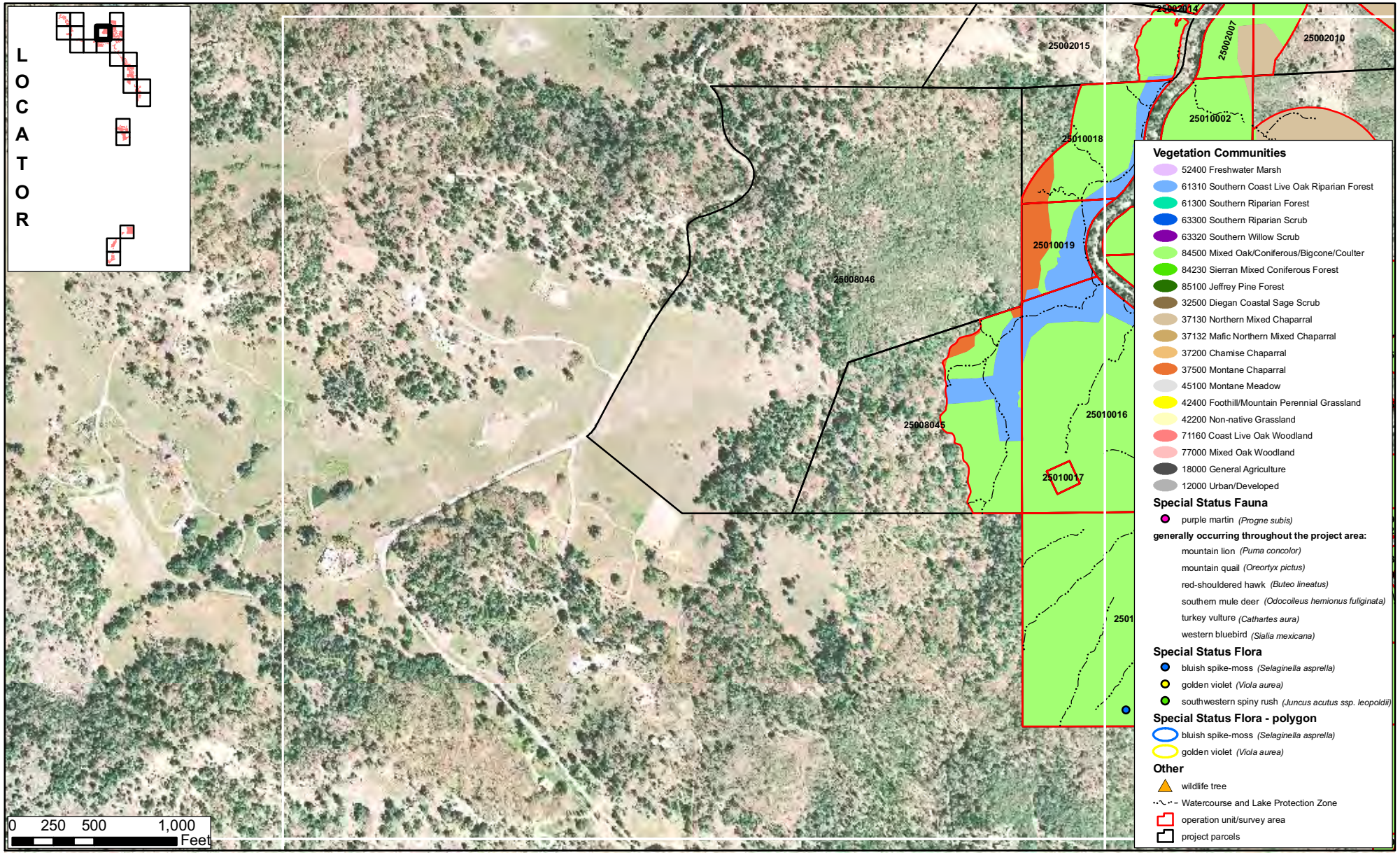


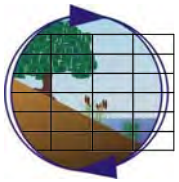
N
W E
S

Biological Resources Map

San Diego County Hazardous Fuels Reduction Project
Greater Julian Project Area

Figure 3-7

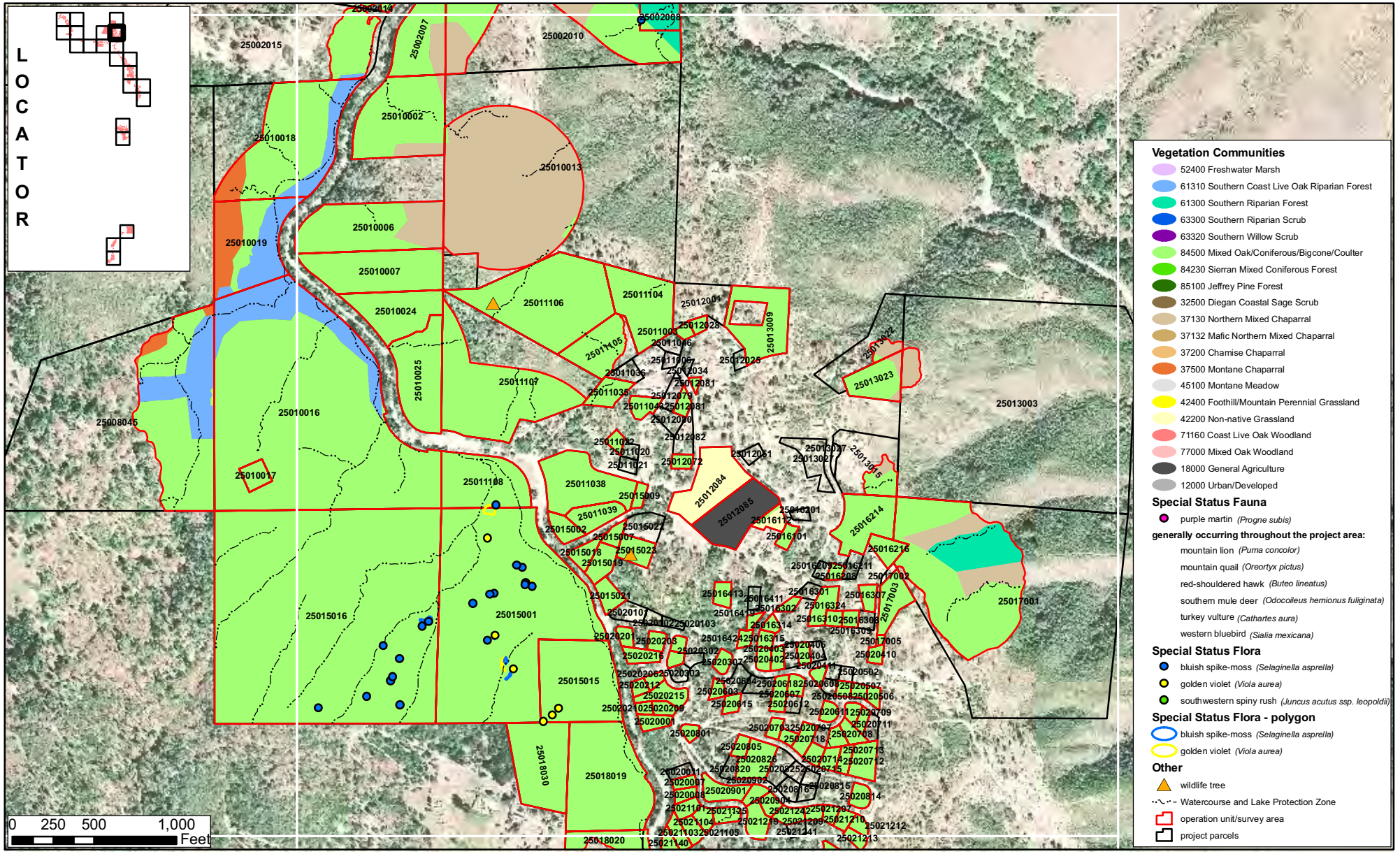




Biological Resources Map

San Diego County Hazardous Fuels Reduction Project
Greater Julian Project Area

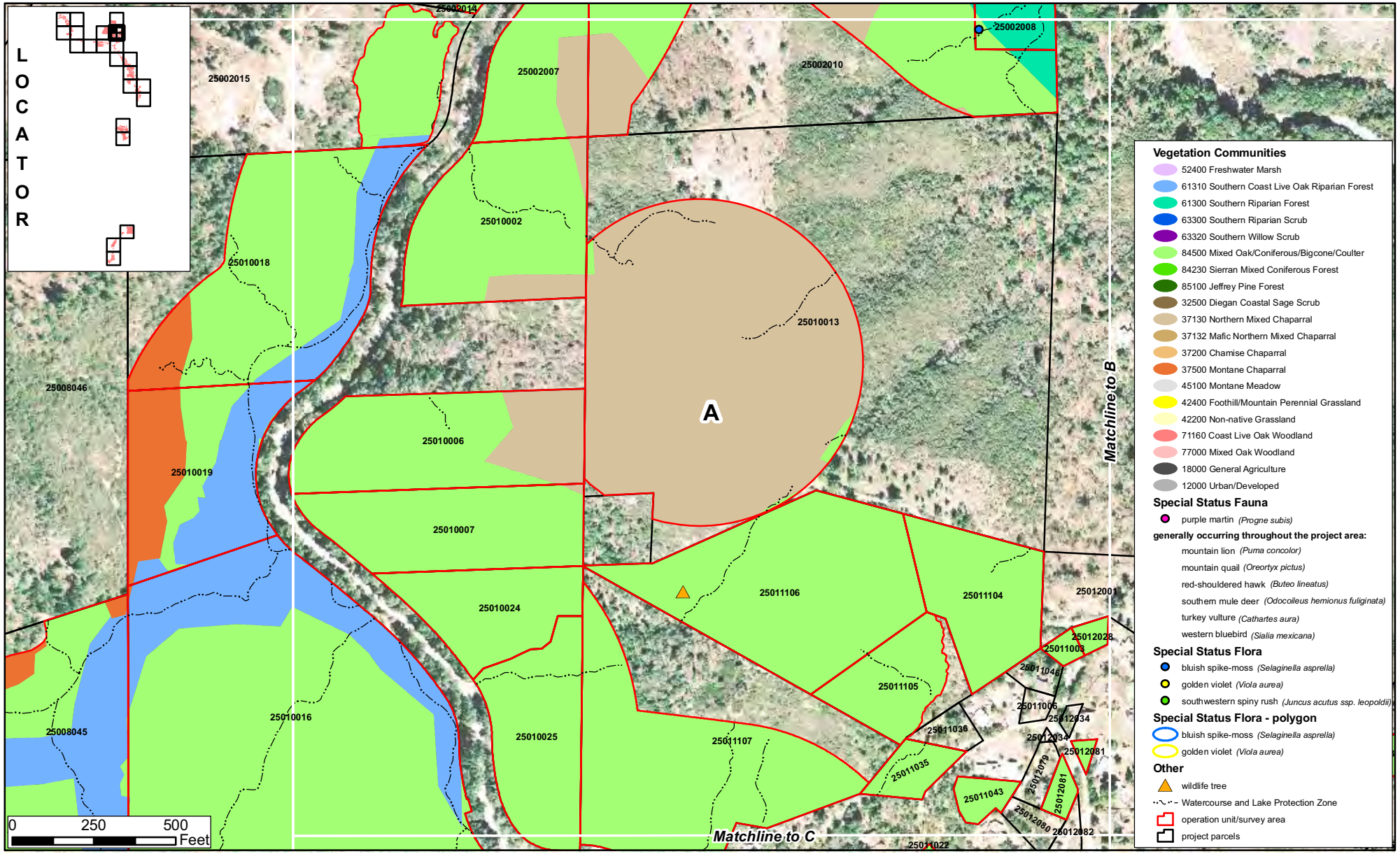
Figure 3-8

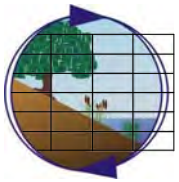


Biological Resources Map

San Diego County Hazardous Fuels Reduction Project
Greater Julian Project Area

Figure 3-9



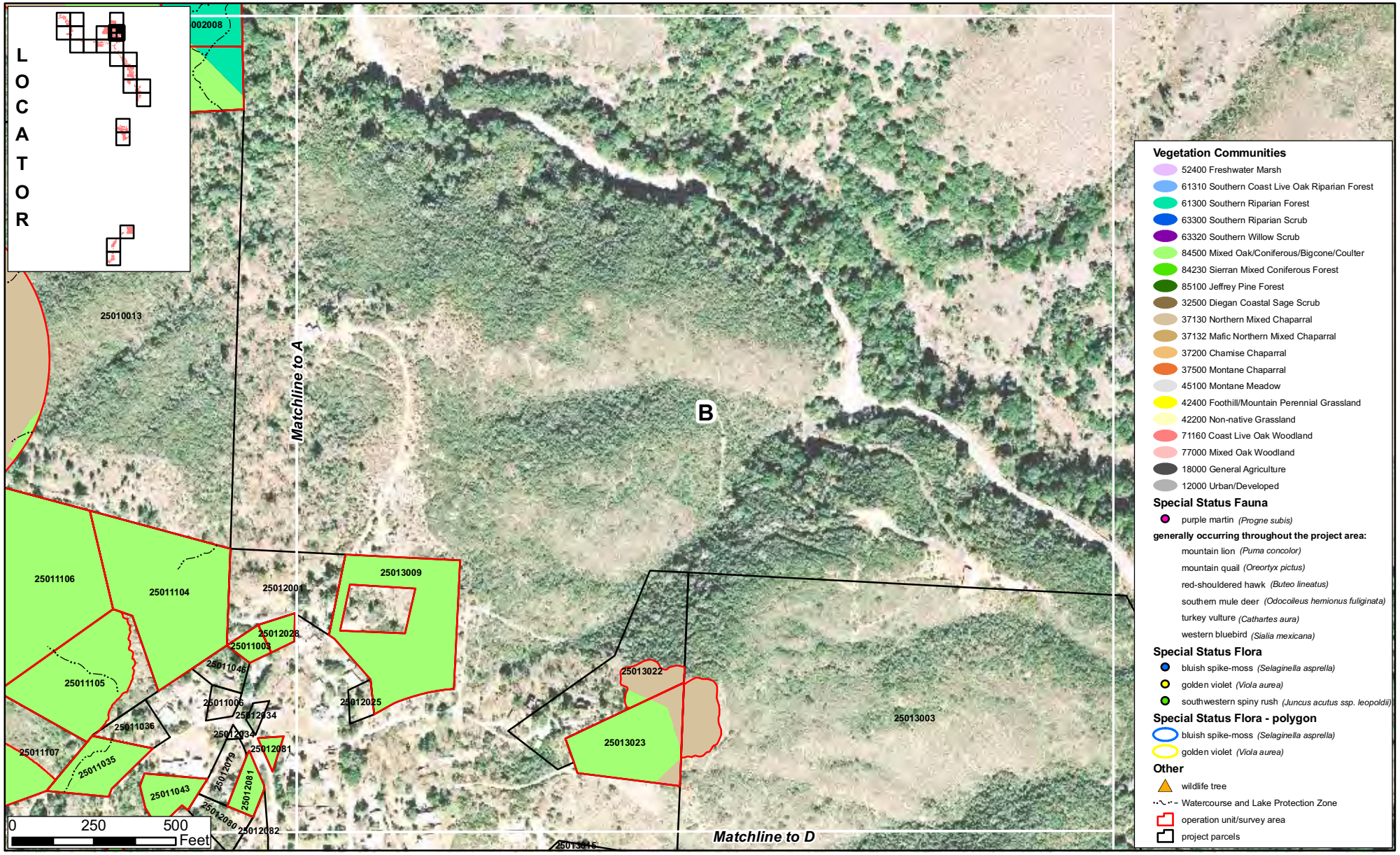


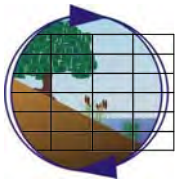
N
W E
S

Biological Resources Map

San Diego County Hazardous Fuels Reduction Project
Greater Julian Project Area

Figure 3-9a

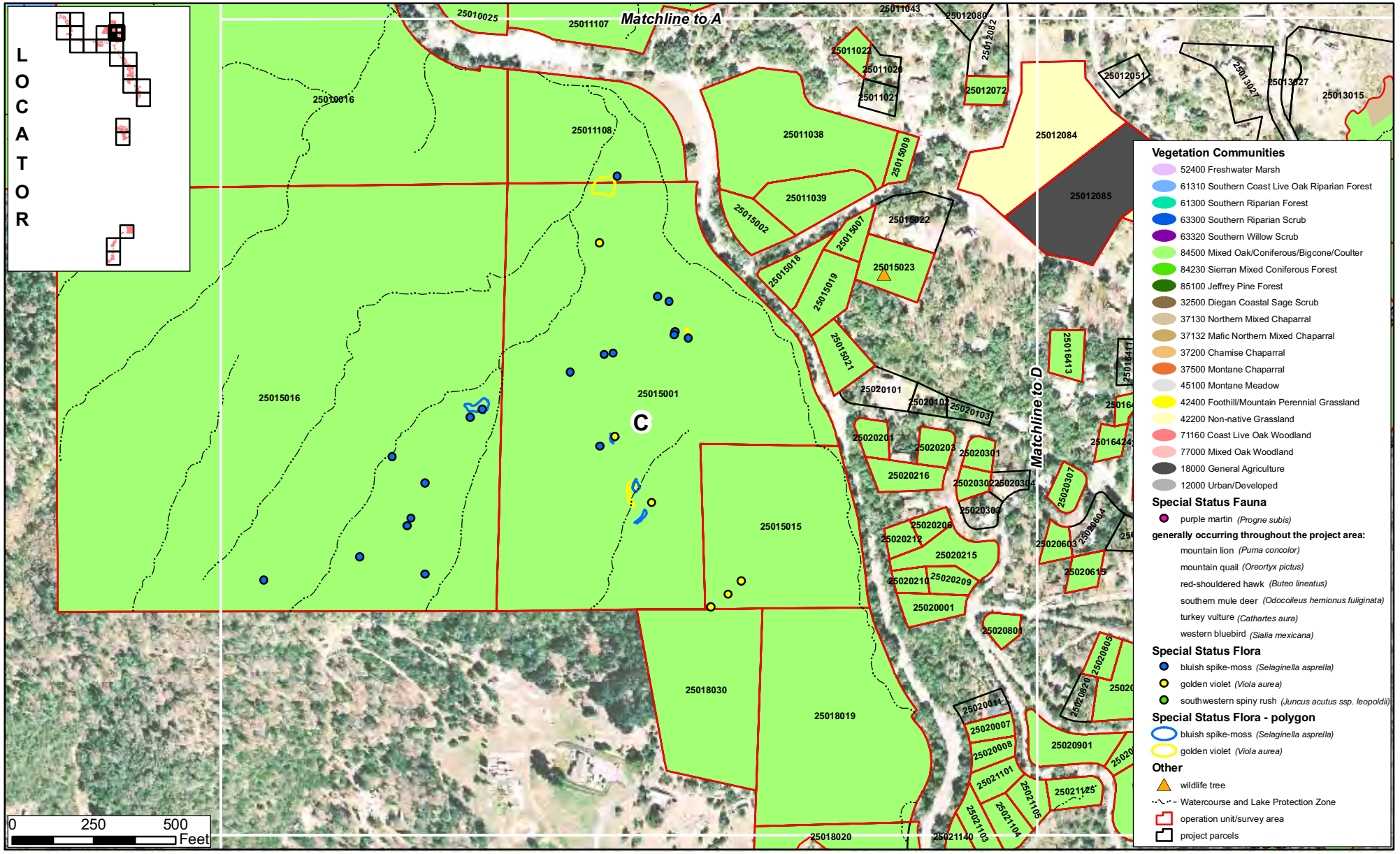


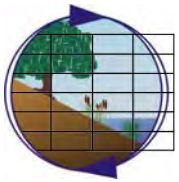


Biological Resources Map

San Diego County Hazardous Fuels Reduction Project
Greater Julian Project Area

Figure 3-9b

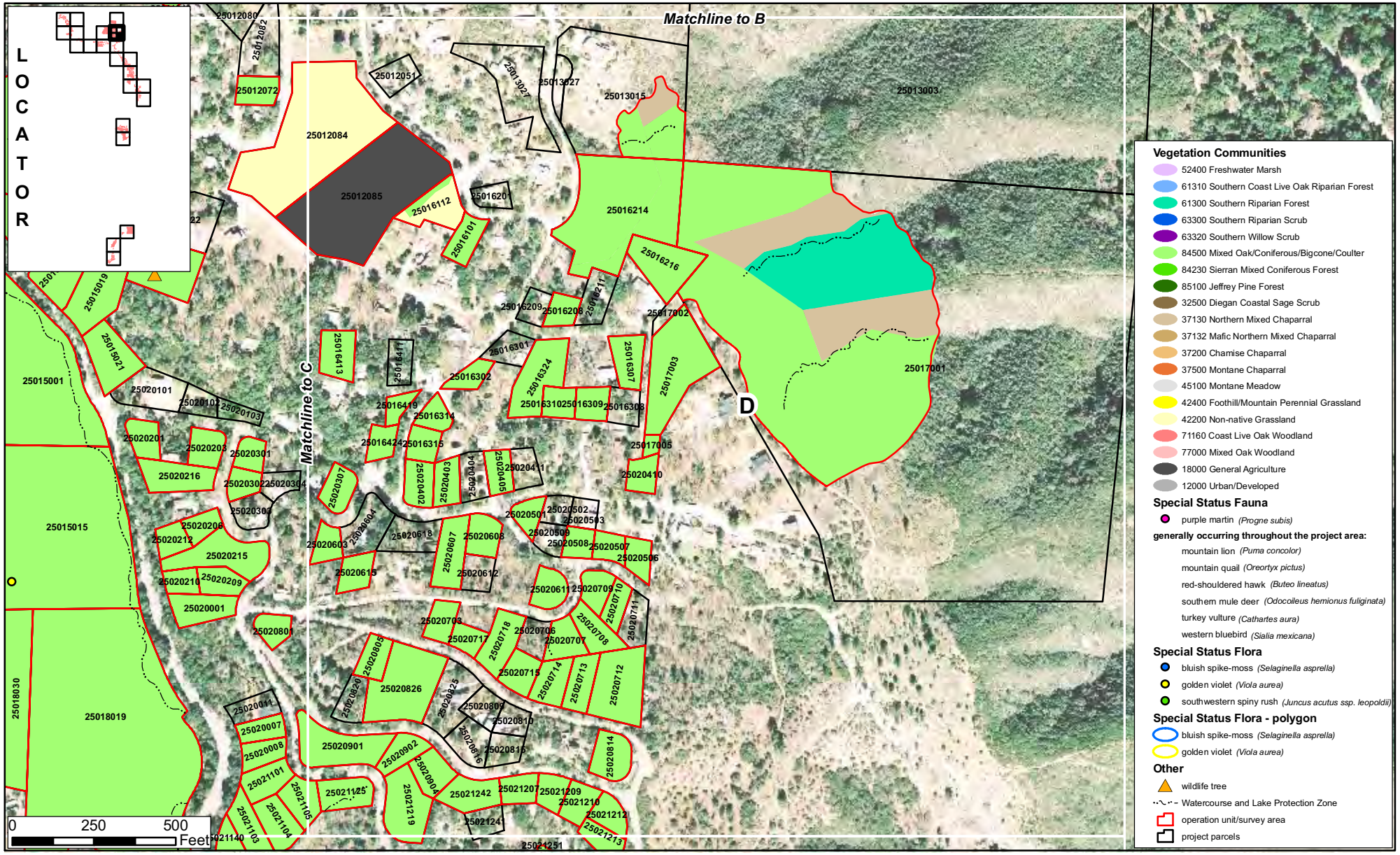




Biological Resources Map

San Diego County Hazardous Fuels Reduction Project
Greater Julian Project Area

Figure 3-9c

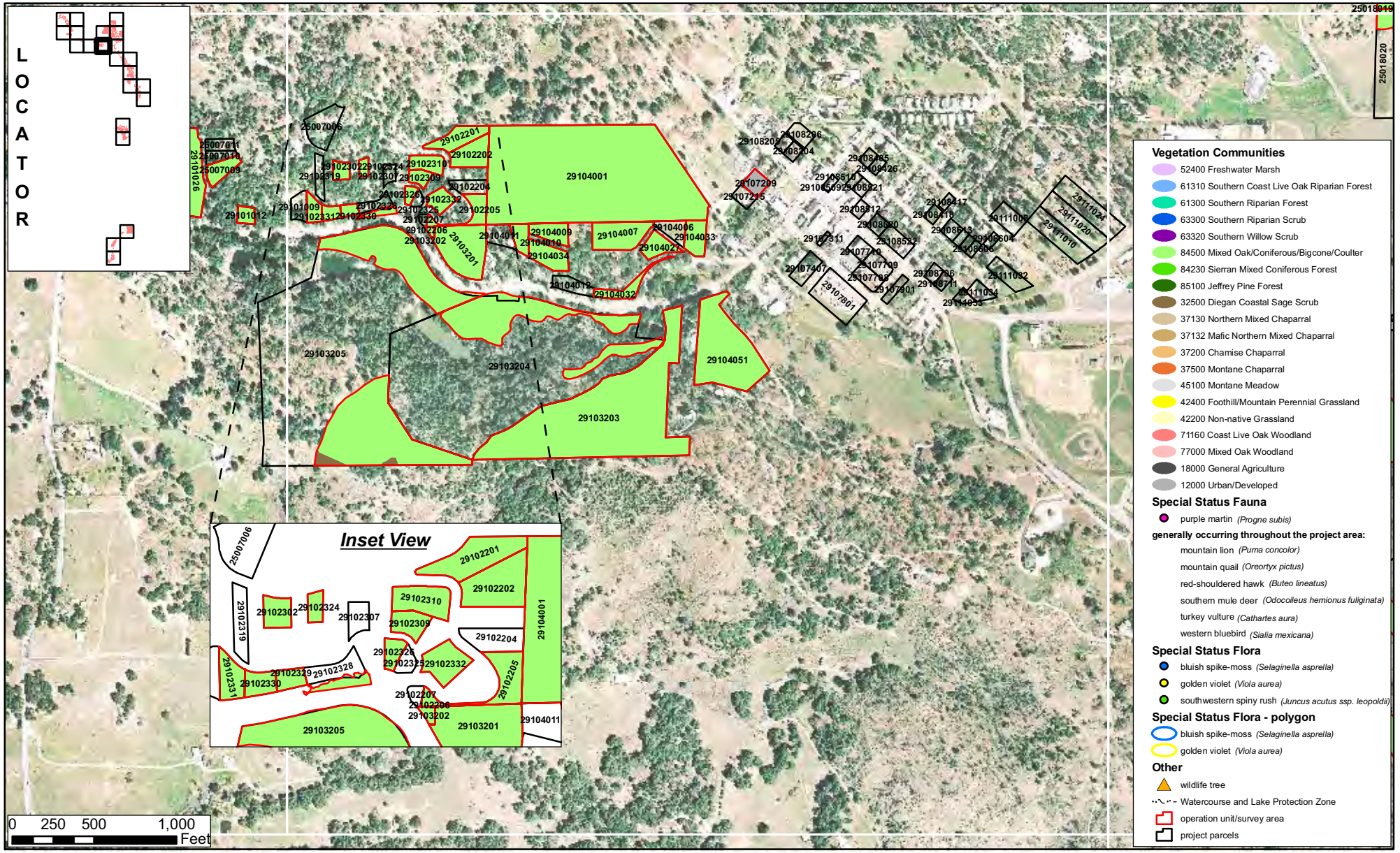


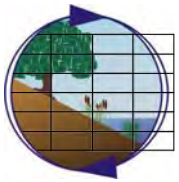
N
W E
S

Biological Resources Map

San Diego County Hazardous Fuels Reduction Project
Greater Julian Project Area

Figure 3-9d



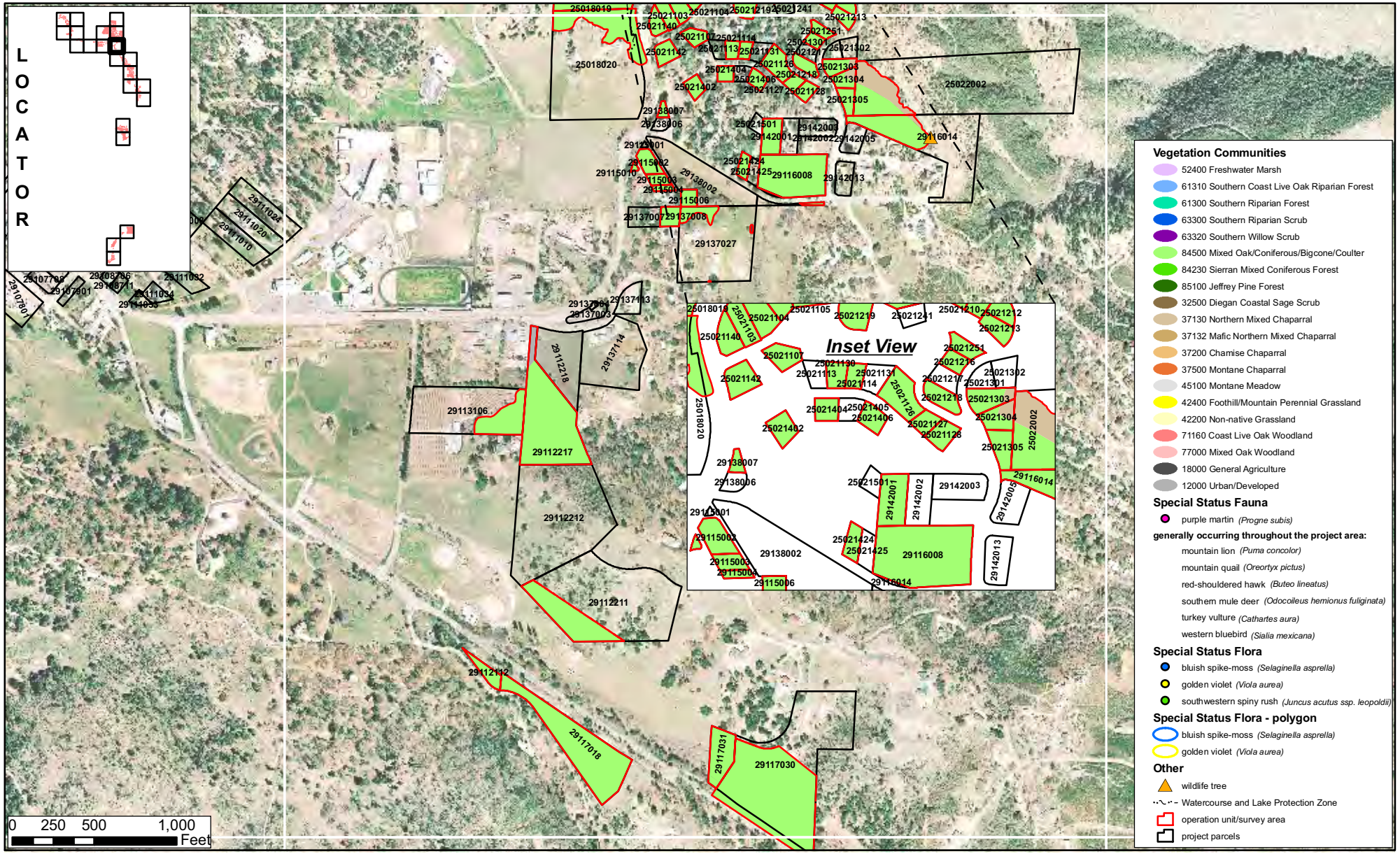


N W E S

Biological Resources Map

San Diego County Hazardous Fuels Reduction Project
Greater Julian Project Area

Figure 3-10

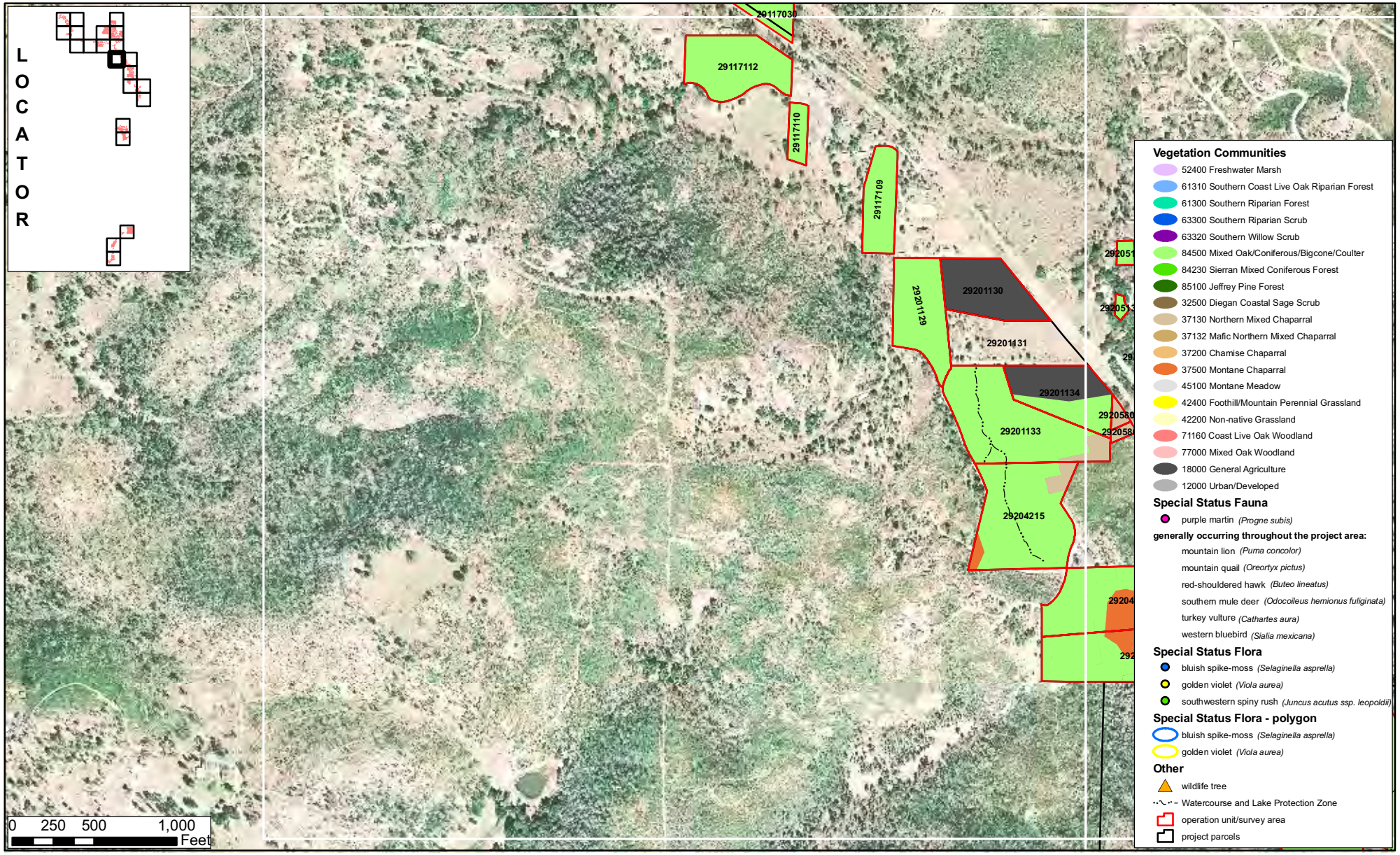


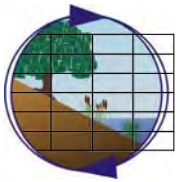
N
W E
S

Biological Resources Map

San Diego County Hazardous Fuels Reduction Project
Greater Julian Project Area

Figure 3-11

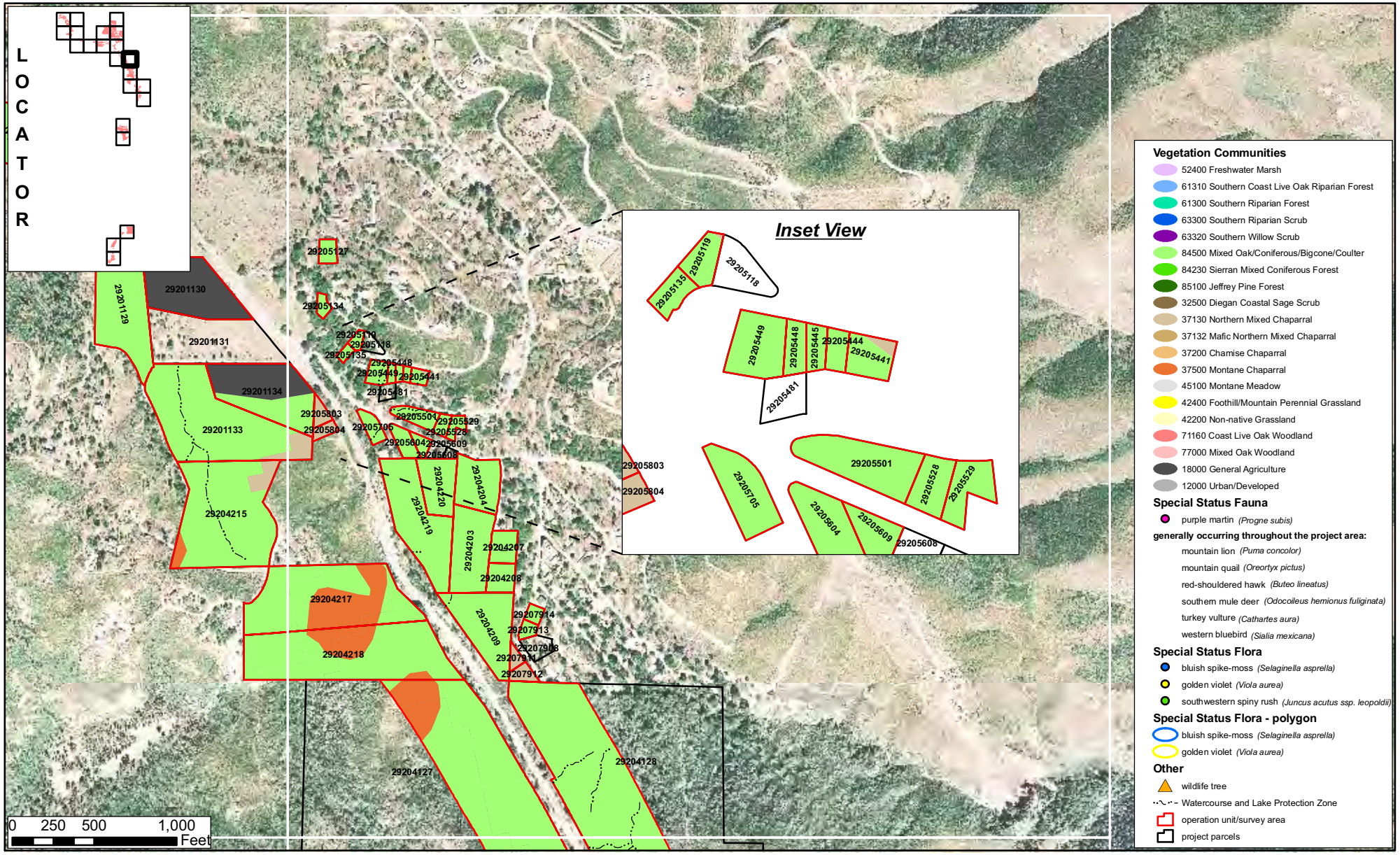




Biological Resources Map

San Diego County Hazardous Fuels Reduction Project
Greater Julian Project Area

Figure 3-12



Vegetation Communities

- 52400 Freshwater Marsh
- 61310 Southern Coast Live Oak Riparian Forest
- 61300 Southern Riparian Forest
- 63300 Southern Riparian Scrub
- 63320 Southern Willow Scrub
- 84500 Mixed Oak/Coniferous/Bigcone/Coulter
- 84230 Sierran Mixed Coniferous Forest
- 85100 Jeffrey Pine Forest
- 32500 Diegan Coastal Sage Scrub
- 37130 Northern Mixed Chaparral
- 37132 Mafic Northern Mixed Chaparral
- 37200 Chamise Chaparral
- 37500 Montane Chaparral
- 45100 Montane Meadow
- 42400 Foothill/Mountain Perennial Grassland
- 42200 Non-native Grassland
- 71160 Coast Live Oak Woodland
- 77000 Mixed Oak Woodland
- 18000 General Agriculture
- 12000 Urban/Developed

Special Status Fauna

- purple martin *(Progne subis)*

generally occurring throughout the project area:

- mountain lion *(Puma concolor)*
- mountain quail *(Oreortyx pictus)*
- red-shouldered hawk *(Buteo lineatus)*
- southern mule deer *(Odocoileus hemionus fuliginata)*
- turkey vulture *(Cathartes aura)*
- western bluebird *(Sialia mexicana)*

Special Status Flora

- bluish spike-moss *(Selaginella asprella)*
- golden violet *(Viola aurea)*
- southwestern spiny rush *(Juncus acutus ssp. leopoldii)*

Special Status Flora - polygon

- bluish spike-moss *(Selaginella asprella)*
- golden violet *(Viola aurea)*

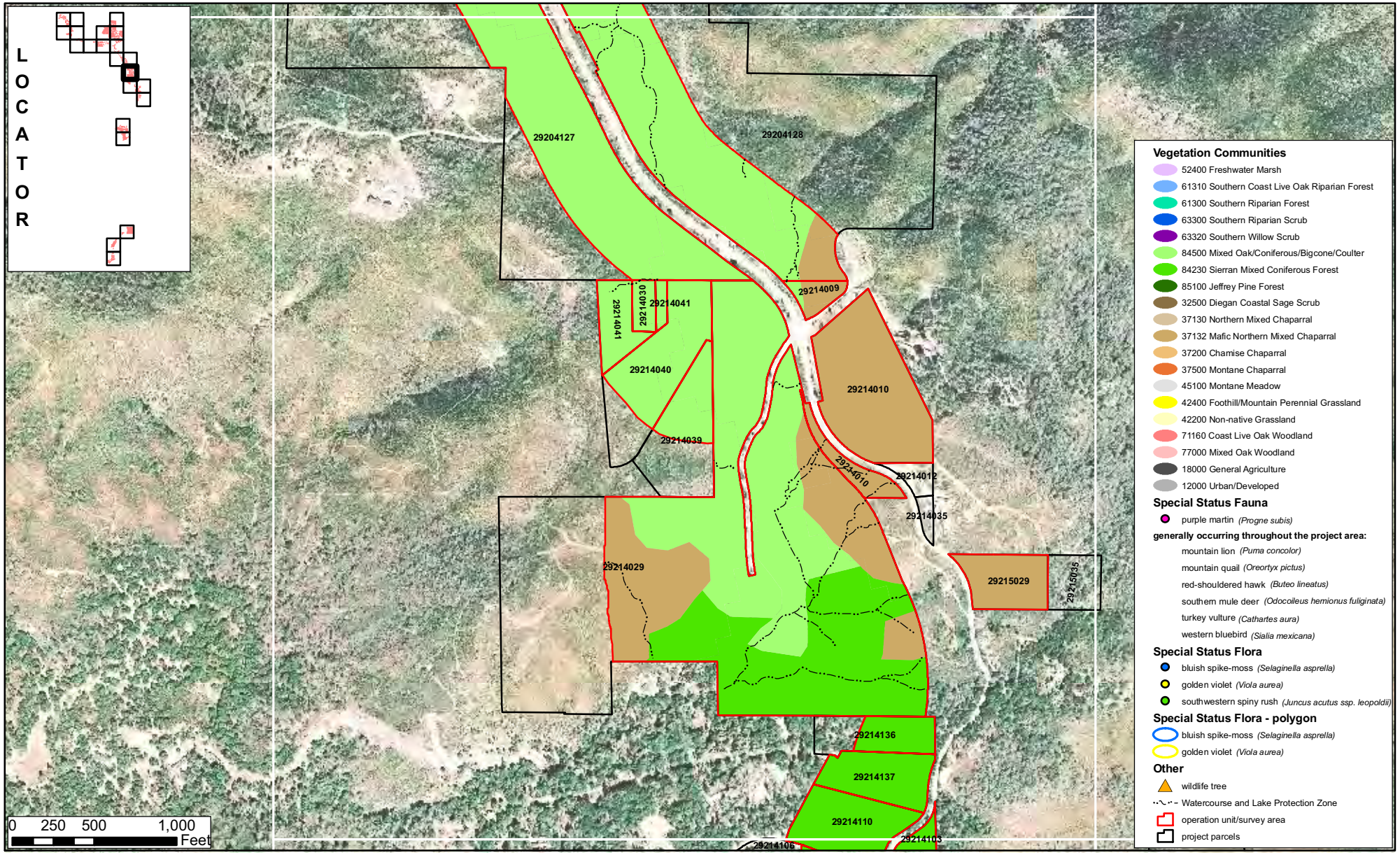
Other

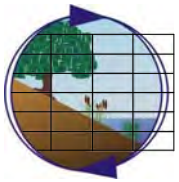
- wildlife tree
- Watercourse and Lake Protection Zone
- operation unit/survey area
- project parcels

Biological Resources Map

San Diego County Hazardous Fuels Reduction Project
Greater Julian Project Area

Figure 3-13

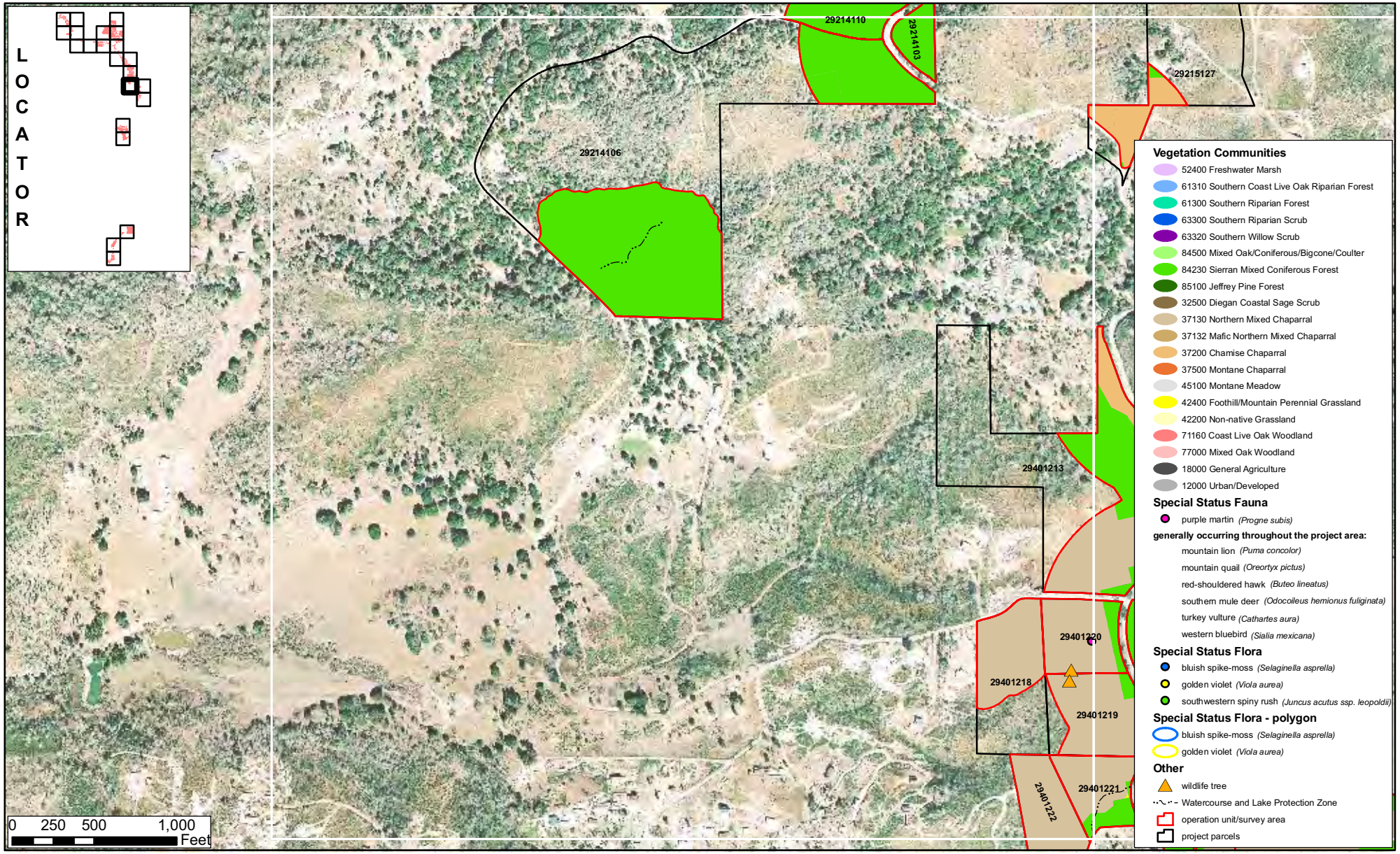


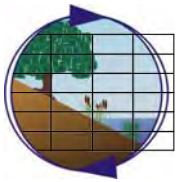


Biological Resources Map

San Diego County Hazardous Fuels Reduction Project
Greater Julian Project Area

Figure 3-14

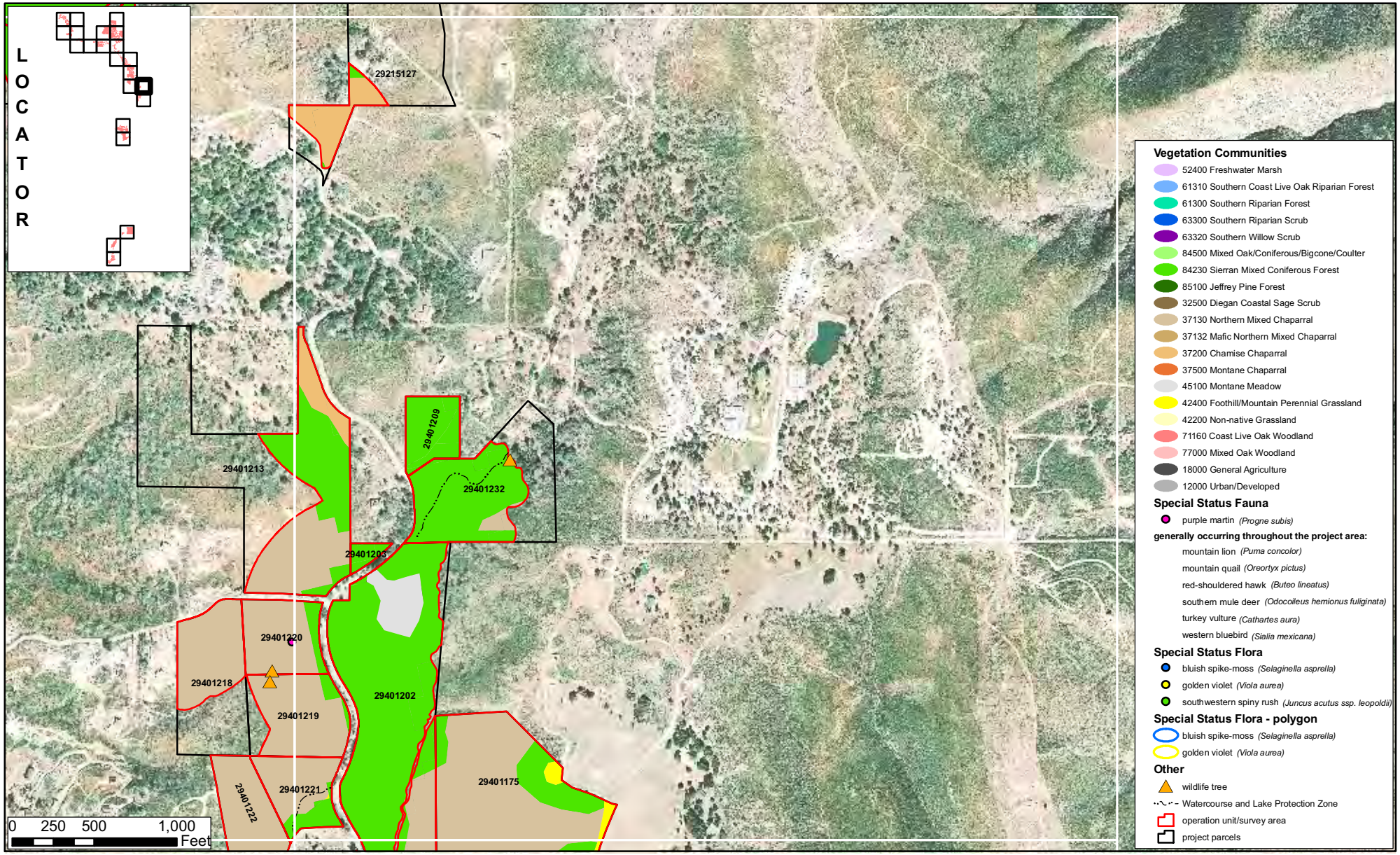


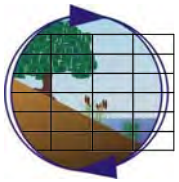


Biological Resources Map

San Diego County Hazardous Fuels Reduction Project
Greater Julian Project Area

Figure 3-15

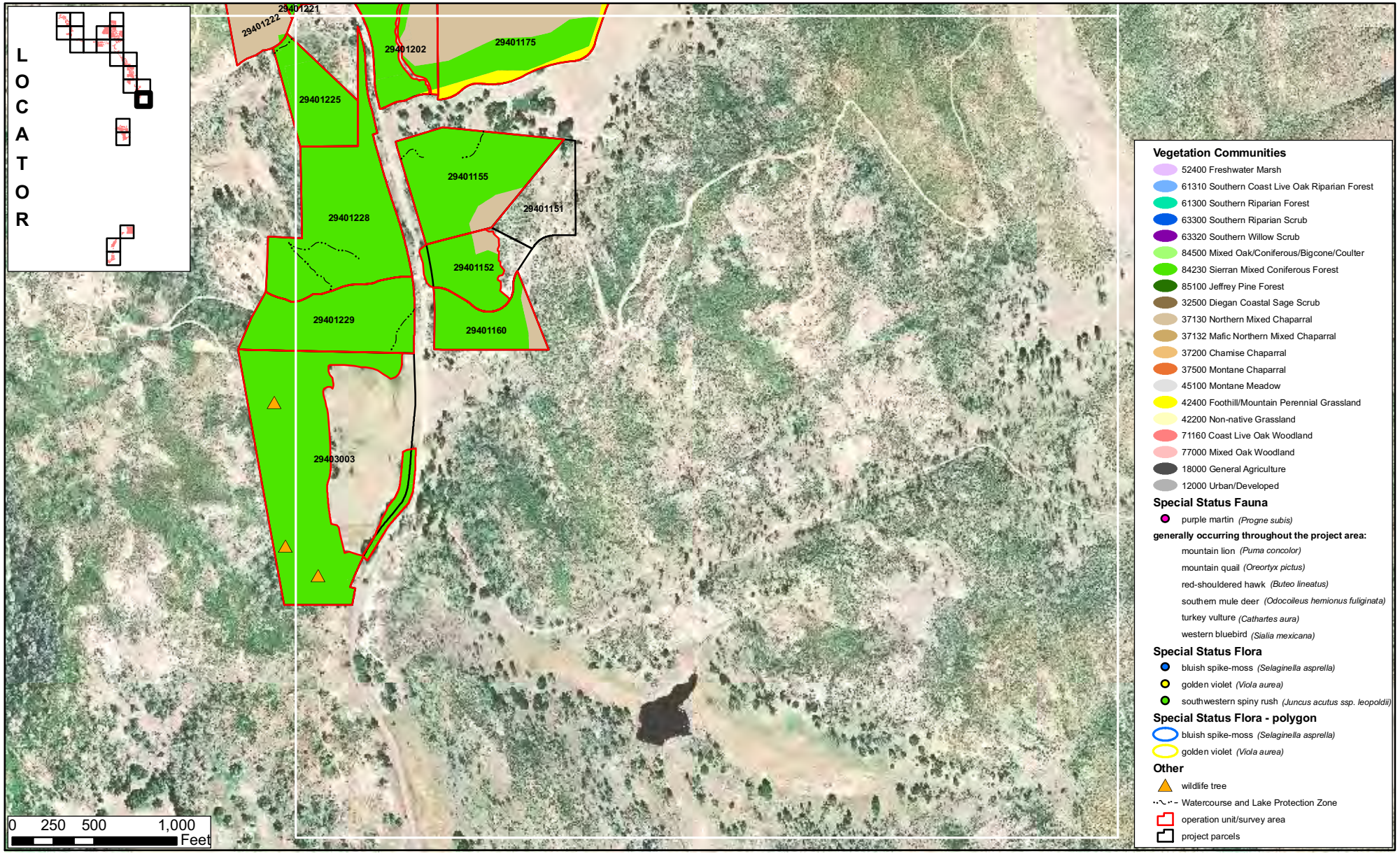


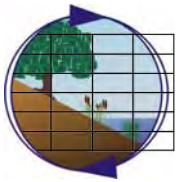


Biological Resources Map

San Diego County Hazardous Fuels Reduction Project
Greater Julian Project Area

Figure 3-16

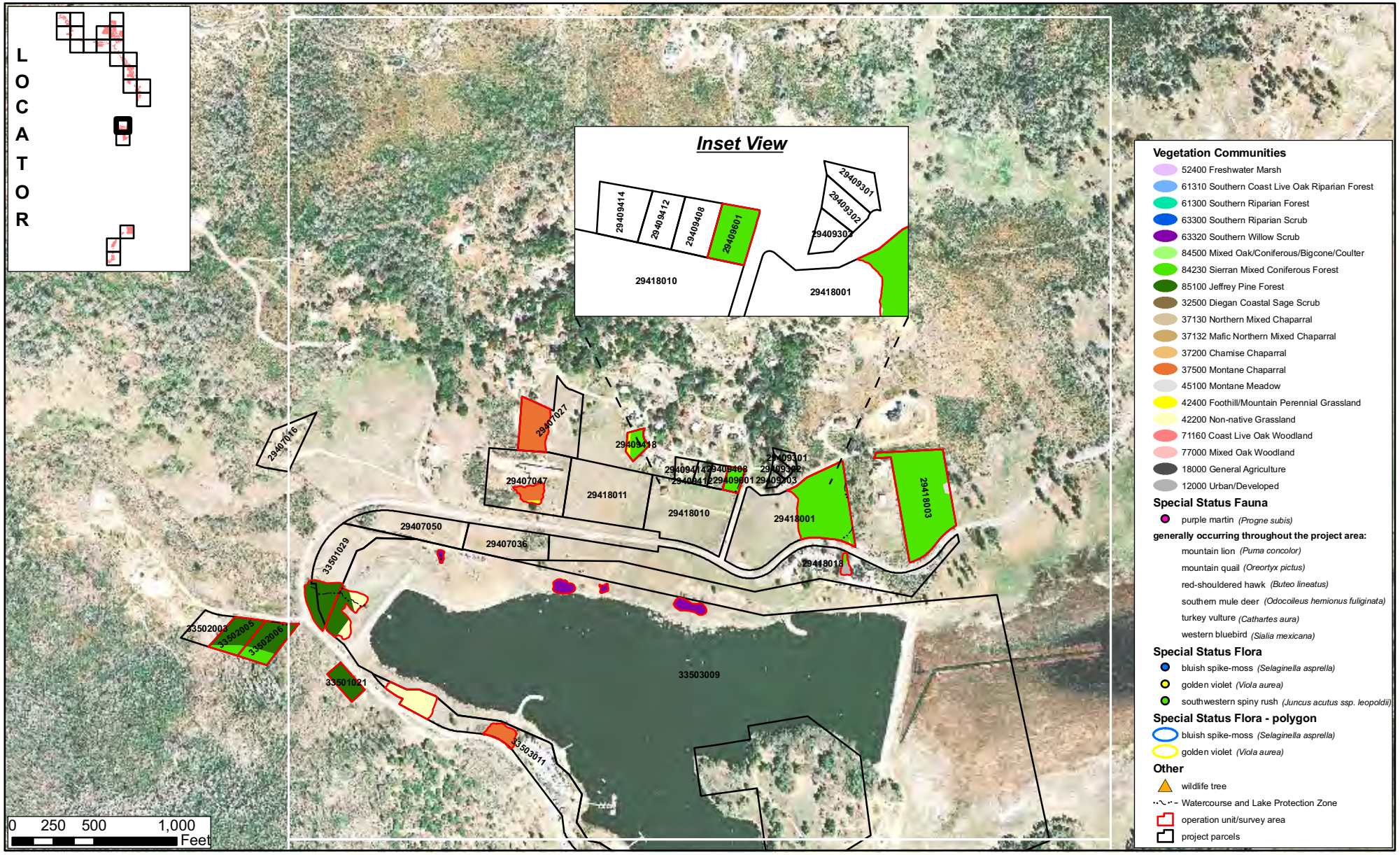


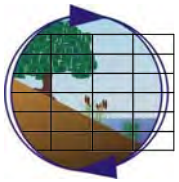


Biological Resources Map

San Diego County Hazardous Fuels Reduction Project
Greater Julian Project Area

Figure 3-17



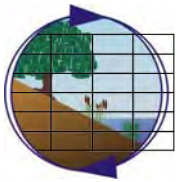


N
W E
S

Biological Resources Map

San Diego County Hazardous Fuels Reduction Project
Greater Julian Project Area

Figure 3-18

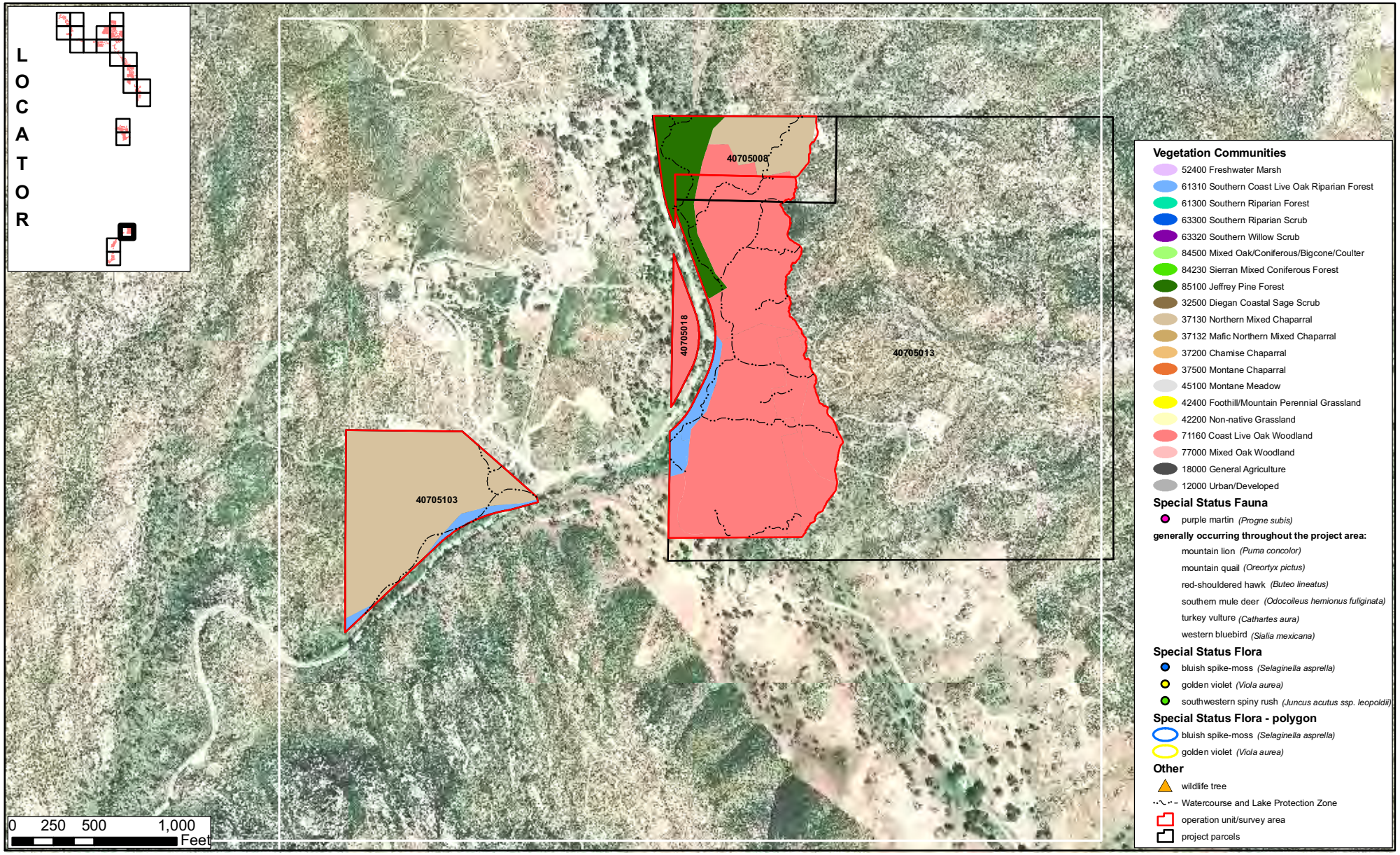


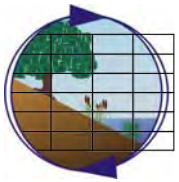
N W E S

Biological Resources Map

San Diego County Hazardous Fuels Reduction Project
Greater Julian Project Area

Figure 3-19



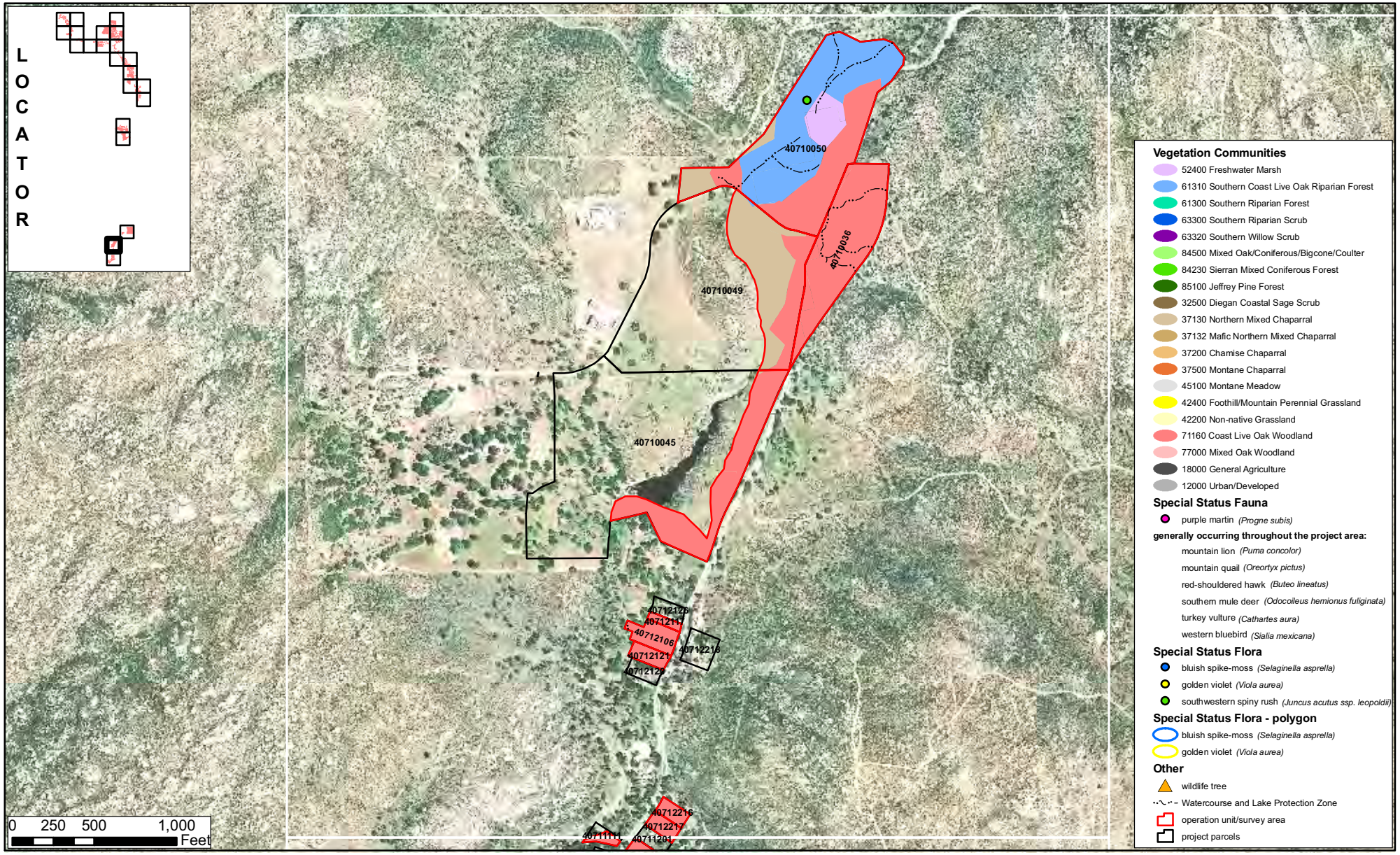


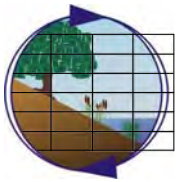
N
W E
S

Biological Resources Map

San Diego County Hazardous Fuels Reduction Project
Greater Julian Project Area

Figure 3-20

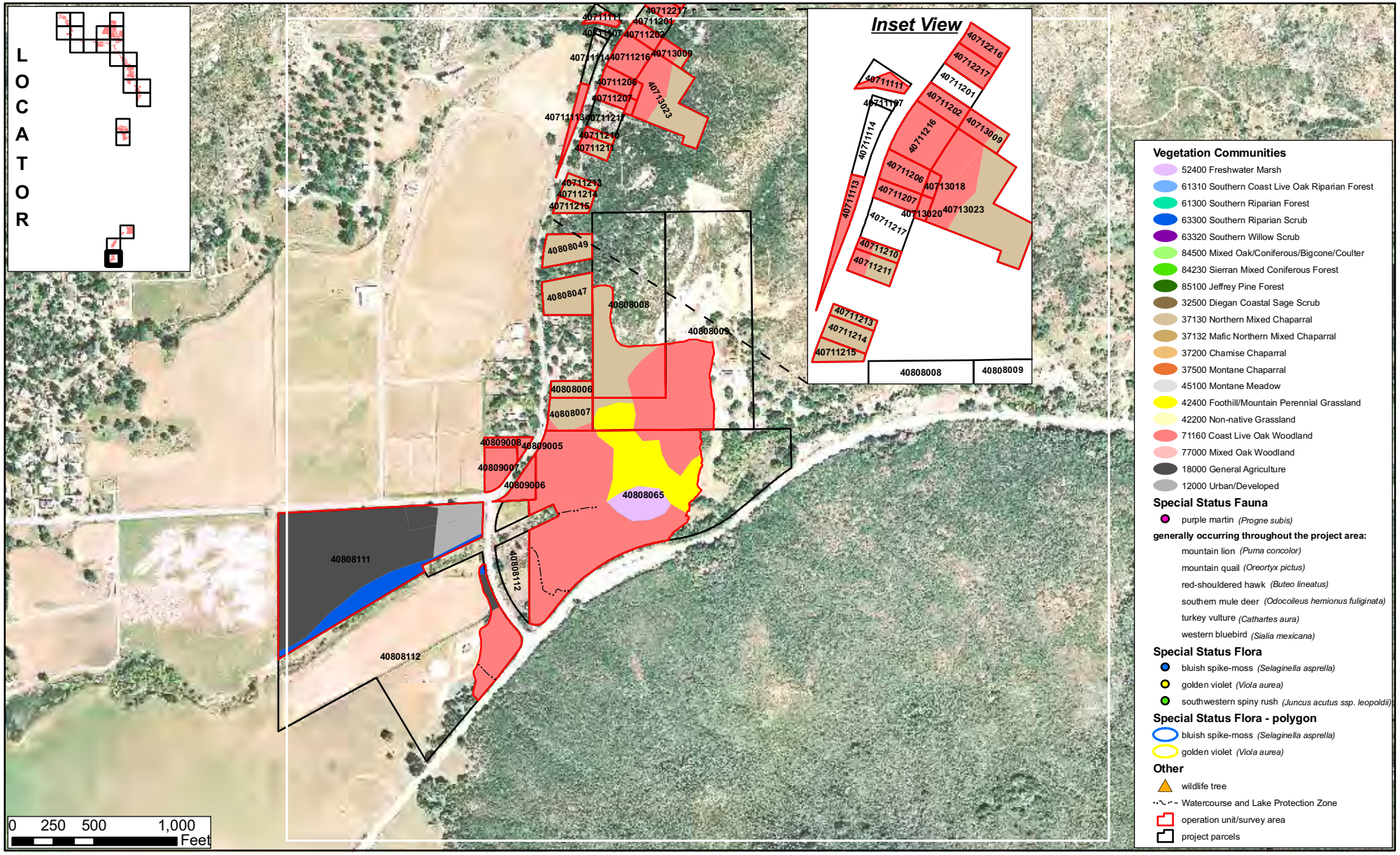


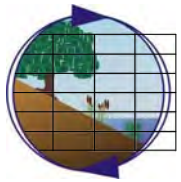


Biological Resources Map

San Diego County Hazardous Fuels Reduction Project
Greater Julian Project Area

Figure 3-21





Biological Resources Map

San Diego County Hazardous Fuels Reduction Project
Greater Julian Project Area

Figure 3-22

The majority of the project area consists of mixed oak/coniferous/bigcone/Coulter forest, particularly in the Whispering Pines project area and the central portion of the SR 78/79 Corridor project area. This forest community has a diversity of oak and conifer species. Characteristic species observed during the biological surveys include coast live oak (*Quercus agrifolia* var. *agrifolia*), California black oak (*Quercus kelloggii*), canyon live oak (*Quercus chrysolepis*), California incense cedar (*Calocedrus decurrens*), white fir (*Abies concolor*), big-cone Douglas fir (*Pseudotsuga macrocarpa*), and Coulter pine (*Pinus coulteri*).

Large portions of the project area also consist of coast live oak woodland, Sierran mixed coniferous forest, and northern mixed chaparral. Coast live oak woodland is primarily located in the northern portion of the SR 78/79 Corridor project area, where it transitions towards the south into mixed oak/coniferous/bigcone/Coulter forest and then Sierran mixed coniferous forest. The coast live oak woodland is dominated by coast live oak, often with an understory consisting of poorly developed shrubs such as laurel sumac (*Malosma laurina*), toyon (*Heteromeles arbutifolia*), and blue elderberry (*Sambucus mexicana*), as well as non-native grasses. Characteristic species of the Sierran mixed coniferous forest include oaks such as California black oak, as well as white fir, *Ceanothus* sp., and Jeffrey pine (*Pinus jeffreyi*). Many of the locations that burned during the 2003 Cedar Fire are recovering post-fire as northern mixed chaparral, but show evidence of previous oak woodland/coniferous forest habitat. The northern mixed chaparral consists of dense, shrubby vegetation with characteristic species such as *Ceanothus* sp., sugar bush (*Rhus ovata*), mountain-mahogany (*Cercocarpus betuloides* var. *betuloides*), western poison oak (*Toxicodendron diversilobum*), toyon, and chamise (*Adenostoma fasciculatum*).

Three additional chaparral vegetation community types were mapped within the project area. One location of the sensitive, mafic northern mixed chaparral was mapped in the central portion of the SR 78/79 Corridor where the underlying substrate consists of gabbro soils (e.g., APNs 292-140-09, 292-140-10, 292-140-29, 292-141-28, and 292-150-29) (see Figure 3-14). Additional chaparral vegetation community types include chamise chaparral, mapped in locations dominated by chamise, as well as montane chaparral, mapped in locations integrated with coniferous forest.

Very limited amounts of Diegan coastal sage scrub occur at the lower elevations of the project area. Dominant plants include white sage (*Salvia apiana*), California sagebrush (*Artemisia californica*), coast California buckwheat (*Eriogonum fasciculatum* var. *fasciculatum*), saw-toothed goldenbush (*Hazardia squarrosa*), and coastal deerweed (*Lotus scoparius*).

Small amounts of mixed oak woodland and Jeffrey pine forest, as well as wetland habitats, including southern coast live oak riparian forest, southern riparian forest, southern riparian scrub, southern willow scrub and freshwater marsh, are also located within the project area. The mixed oak woodland is located in the northern portion of the SR 78/79 Corridor and is dominated by a variety of *Quercus* sp. Southern coast live oak riparian forest and southern riparian forest are located along a portion of Banner Creek in the Whispering Pines community, and southern coast live oak riparian forest and southern riparian scrub are located along portions of Coleman and Descanso Creeks in the SR 78/79 Corridor project area. A small amount of Jeffrey pine forest, dominated by Jeffrey pine, is located around Cuyamaca Reservoir. Small patches of southern willow scrub, dominated by Goodding's black willow (*Salix gooddingii*) and arroyo willow (*Salix lasiolepis*), as well as freshwater marsh, dominated by broad-leaved cattail (*Typha latifolia*), are also located around Cuyamaca Reservoir and along Descanso and Samagatuma Creeks, respectively.

Grasslands are sporadically located throughout the project area, often as an understory or in the openings of the other vegetation types. Only larger areas of grasslands were mapped separately (i.e., where oak trees are generally greater than 100 feet apart from established oak woodland, etc.). A small amount of non-native grassland was mapped in locations dominated by non-native forbs and grasses such as short-pod mustard (*Hirschfeldia incana*), ripgut grass (*Bromus diandrus*), and slender wild oat (*Avena barbarata*). A small amount of foothill/mountain perennial grassland consisting of native grasses was also mapped near Samagatuma Creek. Locations mapped as montane meadows consist of a dense growth of native sedges such as flatsedge (*Cyperus eragrostis*) and pale spike-rush (*Eleocharis macrostachya*), as well as other native perennial herbs.

Urban/developed land consisting mostly of rural single-family residences is also located throughout the project area; however, only a few larger areas were mapped separately as developed where no natural land was evident. Field/pastures, row crops, and old orchards also surround some of the rural single-family residences, and these areas were mapped as general agriculture.

Regionally, chaparral tends to replace sage scrub in areas located more inland and at higher elevations and transitions into oak woodlands and forest habitats at the mountain elevations. Oak woodland and forest habitats have high conservation value due to the different habitat niches created for wildlife from the presence of several vertical layers, including ground, herb, shrub, single and multiple layered canopies, which increase species diversity by providing an abundance of breeding, roosting, foraging, and shelter habitat. Wetlands and grassy meadows encompassed within the oak woodlands and forest habitats also provide food, cover, and breeding habitat for several sensitive wildlife species and have high conservation value.

The County RPO restricts impacts to various natural resources including wetlands and Sensitive Habitat Lands (County 2009b, Section 2.3). The County RPO (2007) defines "Sensitive Habitat Lands" as: "Land which supports unique vegetation communities, or the habitats of rare or endangered species or sub-species of animals or plants as defined by Section 15380 of the State CEQA Guidelines (14 Cal. Admin. Code Section 15000 et seq.), including the area which is necessary to support a viable population of any of the above species in perpetuity, or which is critical to the proper functioning of a balanced natural ecosystem or which serves as a functioning wildlife corridor. 'Unique vegetation community' refers to associations of plant species, which are rare or substantially depleted. These may contain rare or endangered species, but other species may be included because they are unusual or limited due to a number of factors, for example: (a) they are only found in the San Diego region; (b) they are a local representative of a species or association of species not generally found in San Diego County; or (c) they are outstanding examples of the community type as identified by the CDFG listing of community associations."

The wetland habitats and mafic northern mixed chaparral present within the project area are considered County RPO Sensitive Habitat Lands. The wetland vegetation communities provide breeding, roosting, foraging, and shelter habitat that are necessary to support viable populations of wildlife species and are critical to the proper functioning of a balanced natural ecosystem, and the mafic northern mixed chaparral represents a unique vegetation community with an unusual gabbroic substrate that has a higher potential to support special status floral species.

1.4.3. Flora

The flora noted within the project area includes native and non-native species typically found in oak woodlands, forest, and chaparral communities where some development and disturbance is found. The majority of the plant species observed during the biological surveys include native flora, with non-native flora predominantly located around the rural single-family residences. The most common floral species noted during the biological surveys include coast live oak, California black oak, western poison oak, and red brome. A list of the floral species identified on the project parcels/operation units during the biological surveys is included in this report in Appendix 3.

1.4.4. Fauna

The fauna noted within the project area includes mostly native species that typically live or forage in oak woodlands, forest, and chaparral communities. The most common native fauna species noted during the biological surveys include the side blotch lizard (*Uta stansburiana*), western scrub-jay (*Aphelocoma californica*), and California towhee (*Pipilo crissalis*), as well as wild turkey (*Meleagris gallopavo*), an introduced species, which was predominantly located around the rural single-family residences. A list of the faunal species observed or detected on the project parcels/operation units during the biological surveys is included in this report in Appendix 4.

A total of nine wildlife trees were designated on the following APNs: 250-111-06 (one), 250-150-23 (one), and 291-160-14 (one) in the Whispering Pines community; and 294-012-19 (one), 294-012-20 (one), 294-012-32 (one), and 294-030-03 (three) along the SR 78/79 Corridor (see Figures 3-9a, 3-9c, 3-11, 3-15, 3-16, and 3-17). These trees provide unique nesting sites, perching locations/snags, and/or areas for denning/cover not found in the adjacent live trees in the surrounding parcel area. Photographs of the designated wildlife trees are included in this report in Appendix 5.

Large mammals such as southern mule deer (*Odocoileus hemionus fuliginata*) were observed utilizing habitat throughout the project area, and tracks of mountain lion (*Felis concolor*) were also noted. Mule deer occur in intermediate successional stages of forest, woodland, and brush habitats, but prefer vegetation that provides woody cover, meadow and shrubby openings, and perennial water sources; mountain lion movement closely follows its primary prey, mule deer (CDFG 2010a).

The project area is also utilized by regionally common and migratory birds and raptors that are not designated as special status species under CEQA, but are protected under the federal Migratory Bird Treaty Act (MBTA) and California Fish and Game Codes §3503 and §3015. No large raptor nests were observed during the biological surveys; however, several smaller avian nests and suitable nesting tree cavities were observed throughout the project area. Migratory bird and raptor use of the project area would include both potential foraging and nesting habitat.

1.4.5. Sensitive Plant Species

Three special status floral species were detected on the APNs/operation units during the biological surveys: southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*), bluish-spike moss (*Selaginella asprella*) and golden violet (*Viola aurea*).

Golden violet is a native plant designated as a Special Plant in the CNDDB and a rare, threatened, or endangered plant in California but more common elsewhere by the CNPS (List 2) and County (List B) (CDFG 2010c and County 2009b). This small, perennial herb typically grows on dry, sandy

slopes in pinyon-juniper woodland (CNPS 2010 and Reiser 2001), which is found outside but in the proximity of the project area towards the south and east. This plant typically occurs at elevations ranging from 1,000 to 2,040 meters (3,281 to 6,693 feet) AMSL and has a blooming period between April and July. A population of approximately 60 golden violet plants was detected on APN 250-150-01, and additional individuals were also detected on the adjacent APN 250-150-15 located in the Whispering Pines community; a small population was also noted on APN 248-060-33 along the SR 78/79 Corridor (see Figures 3-2 and 3-9c).

Southwestern spiny rush is a native plant designated as a Special Plant in the CNDDB and a plant of limited distribution by the California Native Plant Society (CNPS) (List 4) and County (List D) (CDFG 2010c and County 2009b). This distinctive, large, perennial herb grows in meadows and along the edges of freshwater marshes at elevations ranging from 2 to 900 meters (10 to 2,952 feet) (CNPS 2010 and Reiser 2001). The plant blooming period is generally during May and June. Approximately six to eight patches of southwestern spiny rush were detected surrounding the freshwater marsh on APN 407-100-50 located along the SR 78/79 Corridor (see Figure 3-21).

Bluish-spike moss is a native plant also designated as a Special Plant in the CNDDB and a plant of limited distribution by the California Native Plant Society (CNPS) (List 4) and County (List D) (CDFG 2010c and County 2009b). This rhizomatous herb grows in granitic rock in cismontane woodland and coniferous forest at elevations ranging from 1,600 to 2,700 meters (5,249 to 8,858 feet) AMSL (CNPS 2010 and Reiser 2001). The plant blooming period is generally during July. Bluish-spike moss was detected on APNs 250-020-08, 250-111-08, 250-150-01, and 250-150-16 located in the Whispering Pines community (Figures 3-9a and 3-9c).

In accordance with the County Report Format and Content Requirements [for] Biological Resources, Third Revision (2009c), CNDDB forms for the special status floral species occurrences discussed above have been completed and submitted to the CDFG and are included with this report in Appendix 6.

A summary of the special status floral species detected within the project area and an evaluation of the potential for additional special status floral species to occur is included with this report in Appendix 6.

1.4.6. Sensitive Animal Species

Seven special status faunal species were detected on the APNs/operation units during the biological surveys: red-shouldered hawk (*Buteo lineatus*), turkey vulture (*Cathartes aura*), mountain quail (*Oreortyx pictus*), purple martin (*Progne subis*), western bluebird (*Sialia mexicana*), southern mule deer (*Odocoileus hemionus fuliginata*), and mountain lion (*Puma concolor*).

Purple martin is designated as a Species of Special Concern (SSC) by the CDFG, as a Special Animal in the CNDDB, and a County Group 1 Sensitive Species (CDFG 2009c and County 2009b). This species utilizes open montane woodlands and forest, often near water bodies or riparian habitat, and is generally restricted to areas with dead snags containing old woodpecker cavities for nesting (Unitt 2007). Two adult individuals were identified nesting on APN 294-012-20 along the SR 78/79 Corridor (see Figure 3-16).

Red-shouldered hawk is designated as a County Group 1 Sensitive Species (County 2009b). This species utilizes dense riparian vegetation with habitat edges adjacent to open areas for hunting (Unitt

2007). Red-shouldered hawk was noted throughout the project area and likely utilizes the habitat for both nesting and foraging (see Figures 3-1 through 3-22).

Turkey vulture, mountain quail, western bluebird, southern mule deer, and mountain lion are all designated as a County Group 2 Sensitive Species (County 2009b). Turkey vulture is a year long resident throughout most of California; however, during the winter it is rare in the montane and desert areas of San Diego County. It uses extensive open areas with protective roost sites provided by large trees, snags, thickets and shrubs, where it nests in the crevices of rock outcrops (Unitt 2007). Mountain quail prefer steep slopes with thickets of chaparral, as well as open brushy stands of conifer and deciduous forests and desert edge shrubs, where it nests in shrubs, at the base of trees, or beside fallen logs in overgrown cleared and burn areas. Western bluebird utilizes open woodlands, farmlands, and orchards, and breeds in open, riparian vegetation and woodlands with scattered trees where it nests in woodpecker-excavated cavities. Southern mule deer and mountain lion are crepuscular large mammals that utilize most forest, woodland, and brush habitats, particularly along stream courses with cover adjacent to meadows and shrubby openings. With the exception of the mountain lion, all of these species were noted throughout the project area and likely utilize the habitat for nesting, denning, and foraging (see Figures 3-1 through 3-22). Mountain lion tracks were noted in the project area, which is likely part of a larger territorial range of this species.

In accordance with the County Report Format and Content Requirements [for] Biological Resources, Third Revision (2009c), a CNDDB form for the purple martin occurrence discussed above has been completed and submitted to the CDFG and is included with this report in Appendix 6; no CNDDB forms for the red-shouldered hawk, turkey vulture, mountain quail, western bluebird, southern mule deer, or mountain lion have been completed since the CDFG does not track these species.

A summary of the special status faunal species detected within the project area and an evaluation of the potential for additional special status fauna species to occur within the project area is included with this report in Appendix 8.

1.4.7. Wetlands/Jurisdictional Waters

Potential jurisdictional wetlands and waters of the U.S./streambeds are present along the delineated WLPZs throughout the project area (see Figures 3-1 through 3-22). The functions and values of these wetlands and jurisdictional waterways are expected to be high. The creeks/rivers that run through the project area (e.g., Banner Creek, San Diego River, Bailey Creek, Jim Green Creek, Coleman Creek, Cedar Creek, Boulder Creek, Descanso Creek, and Samagatuma Creek) have higher physical and chemical functions due to the presence of the riparian habitat and the widening of the creeks in some areas, thus allowing for higher groundwater recharge, sediment retention, and nutrient transformation. The several small tributaries that flow from these creeks have lower physical and chemical functions due to the more narrow, incised form of the drainages. In addition, the wetlands and jurisdictional waterways generally support a well-developed, mature riparian system with surrounding oak woodland and forest habitat, including a diversity of floral and faunal species, as well as several species status species. A table stating the count and linear feet of WLPZs by APN is included in this report in Appendix 9.

1.4.8. Habitat Connectivity and Wildlife Corridors

The Whispering Pines community and SR 78/79 Corridor project areas are generally part of a large block of habitat that serves as a core area suitable for migratory and resident wildlife populations, including large mammals, such as the mountain lion, with larger territories and ranges. This block of

habitat connects to other large core areas within the Cleveland National Forest and the Cuyamaca Rancho and Anza-Borrego Desert State Parks. Primary wildlife movement routes likely follow the existing watercourses, valleys, and ridges. SR 78/79 inhibits some wildlife movement through the project area; however, in general, the rural development does not currently constrain habitat connectivity.

1.5. Applicable Regulations

The following section is a brief summary of the federal, state, and local environmental regulations that are considered in this report to apply to the Project (County 2009b).

Federal Regulations and Standards

Federal Endangered Species Act
[U.S.C. Title 16, Chapter 35, Sections 1531-1544]
[http://www4.law.cornell.edu/uscode/html/uscode16/usc_sup_01_16_10_35.html]
"Enacted in 1973, the Endangered Species Act (ESA) provides for the conservation of threatened and endangered species and their ecosystems. The Act prohibits the "take" of threatened and endangered species except under certain circumstances and only with authorization from the USFWS through a permit under Section 4(d), 7 or 10(a) of the Act. Under the Endangered Species Act, 'take' is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

Migratory Bird Treaty Act
[U.S.C. Title 16, Chapter 7, Subchapter II, Sections 703-712]
[http://www4.law.cornell.edu/uscode/html/uscode16/usc_sup_01_16_10_7_20_II.html]
"Congress passed the MBTA in 1918 to prohibit the kill or transport of native migratory birds, or any part, nest, or egg of any such bird unless allowed by another regulation adopted in accordance with the MBTA. The prohibition applies to birds included in the respective international conventions between the U.S. and Great Britain, the U.S. and Mexico, the U.S. and Japan, and the U.S. and Russia."

Bald and Golden Eagle Protection Act
[U.S.C. Title 16, Chapter 5A, Subchapter II, Sections 668 a-d]
[http://www4.law.cornell.edu/uscode/html/uscode16/usc_sup_01_16_10_5A_20_II.html]
"When first enacted in 1940, the Act prohibited the take, transport or sale of bald eagles, their eggs or any part of an eagle except where expressly allowed by the Secretary of Interior. The Act was amended in 1962 to extend the prohibitions to the golden eagle."

Federal Water Pollution Control Act (Clean Water Act), 1972
[U.S.C. Title 33, Ch.26, Sub-Ch.I-VI]
[http://www4.law.cornell.edu/uscode/html/uscode33/usc_sup_01_33_10_26.html]
"The Federal Water Pollution Control Act was first passed by Congress in 1948. The Act was later amended and became known as the Clean Water Act. The Act establishes the basic structure for regulating discharges of pollutants into the waters of the United States. It gives the U.S. Environmental Protection Agency the authority to implement pollution control programs, including setting wastewater standards for industry and water quality standards for contaminants in surface waters. The Act makes it unlawful for any person to discharge any pollutant from a point source into navigable waters, without a permit under its provisions. Clean Water Act 404 permits are issued by the U.S. Army Corps of Engineers for dredge/fill activities within wetlands or non-wetland waters of the U.S. Clean Water Act 401 certifications are issued by the Regional Water Quality Control Board for activities requiring a federal permit or license which may result in discharge of pollutants into waters of the U.S."

State Regulations and Standards

California Environmental Quality Act (CEQA)
[PRC, § 21000 et. seq. and the State CEQA Guidelines, CCR, §15000 et seq.]
[http://ceres.ca.gov/topic/env_law/ceqa/guidelines/]
"CEQA requires that biological resources be considered when assessing the environmental impacts resulting from proposed actions. CEQA does not specifically define what constitutes an 'adverse effect' on a biological resource. Instead, lead agencies are charged with determining what specifically should be considered an impact."

California Fish and Game Code
[http://www.leginfo.ca.gov/]
"The California Fish and Game Code regulates the taking or possession of birds, mammals, fish, amphibia and reptiles, as well as natural resources such as wetlands and waters of the state. It includes the California Endangered Species Act (CESA; Sections 2050-2115) and Streambed Alternation Agreement regulations (Section 1600- 1616), as well as provisions for legal hunting and fishing, and tribal agreements for activities involving take of native wildlife."

California Endangered Species Act
[California Fish and Game Code, Division 3, Chapter 1.5, Sections 2050-2115]
[http://www.leginfo.ca.gov/]
"The California Endangered Species Act (CESA) generally parallels the main provisions of the Federal ESA and is administered by the California Department of Fish and Game. The CESA prohibits take of any species that the California Fish and Game Commission determines to be a threatened or endangered species. CESA allows for take incidental to otherwise lawful development projects upon approval from CDFG. Under the California Fish and Game Code, 'take' is defined as to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill."

California Native Plant Protection Act
[http://law.justia.com/california/codes/fgc/1900-1913.html]
"The Native Plant Protection Act (NPPA) of 1977 (Fish and Game Code Section 1900-1913) directed the Department of Fish and Game to carry out the Legislature's intent to "preserve, protect and enhance rare and endangered plants in this State." The NPPA gave the California Fish and Game Commission the power to designate native plants as "endangered" or "rare" and to protect endangered and rare plants from take."

Porter-Cologne Water Quality Control Act
[California Water Code, Division 7, Sections 13000-14958]
[http://www.leginfo.ca.gov/]
"This Act provides for statewide coordination of water quality regulations. The Act established the California State Water Resources Control Board as the statewide authority and nine separate Regional Water Quality Control Boards to oversee water quality on a day-to-day basis at the regional/local level."

Local Regulations and Standards

San Diego County General Plan – Open Space Element (Part I), Conservation Element (Part X), and Community and Subregional Plans
[http://www.co.san-diego.ca.us/cnty/cntydepts/landuse/planning/zoning/]

"The Open Space Element and the Conservation Element of the General Plan provide guiding principles for the conservation of biological resources. The Open Space Element outlines the goals and policies pertaining to each type of open space, not all of which are for the preservation of biological resources. The Conservation Element, specifically Chapters 3 and 4 address County policies relating to water, vegetation and wildlife habitat. Appendix K of the Conservation Element outlines the County's Resource Conservation Areas, which are further described and delineated in each of the Community and Subregional Plans. Each RCA has been designated as such for a purpose specific to that area. When a site is located within a mapped RCA, the project must comply with the relevant policies for that RCA (i.e., avoidance of oaks, etc.)."

County of San Diego Zoning Ordinance
[http://www.co.san-diego.ca.us/cnty/cntydepts/landuse/planning/zoning/]
"Land may also have a zoning designation or Special Area Regulation with certain restrictions pursuant to the Zoning Ordinance. For instance, lands may have a zoning designation of S81 Ecological Resource Area Regulations. The few uses allowed on lands with this designation are subject to strict provisions and limitations. The Zoning Ordinance also applies other Special Area Regulations with specific restrictions and provisions, including designator G (Sensitive Resource), R (Coastal Resource Protection Area) and/or V (Vernal Pool Area)."

Resource Protection Ordinance
[County of San Diego, Resource Protection Ordinance, 1991 (Ord. Nos. 7968, 7739, 7685 and 7631)]
[http://www.sdcounty.ca.gov/]
"The RPO was adopted in 1989 and later amended in 1991. RPO restricts to varying degrees impacts to various natural resources including wetlands, wetland buffers, floodplains, steep slopes, sensitive habitat lands and historical sites. Certain permit types are subject to the requirement to prepare Resource Protection Studies under the RPO."

"The RPO states that no impacts may occur to lands determined to be wetlands as defined by the ordinance, except those impacts related to aquaculture, scientific research and/or wetland restoration projects. In addition, the ordinance requires that a wetland buffer be provided to further protect the wetland resources. Access paths, improvements necessary to protect the adjacent wetlands and those uses allowed within the actual wetland are the only allowed uses within the buffer. No impacts caused by activities other than these specifically mentioned shall be allowed. For more explicit information on these requirements refer to RPO."

"The RPO also limits impacts to sensitive habitat lands. Sensitive habitat lands include unique vegetation communities and/or the habitat that is either necessary to support a viable population of sensitive species, is critical to the proper functioning of a balanced natural ecosystem, or which serves as a functioning wildlife corridor. Impacts shall only be allowed when: (1) all feasible measures have been applied to reduce impacts; and (2) mitigation provides an equal or greater benefit to the affected species. The ordinance includes the provision that when 'the extent of environmentally sensitive lands on a particular legal lot is such that no reasonable economic use of such lot would be permitted by these regulations, then an encroachment into such environmentally sensitive lands to the minimum extent necessary to provide for such reasonable use may be allowed'."

2.0 PROJECT EFFECTS

State CEQA Guidelines §15065 (a) (Title 14, Chapter 3, Article 5) states, "A project may have a significant effect on the environment" if:

- "The project has the potential to substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; substantially reduce the number or restrict the range of an endangered, rare or threatened species; or eliminate important examples of the major periods of California history or prehistory."
- "The project has possible environmental effects which are individually limited but cumulatively considerable."

An Environmental Impact Report (EIR) is being prepared to address potential impacts of this tree removal project. This document assesses the biological resources in the areas identified for fuel reduction and discusses in more detail how sensitive resources will be avoided. The following analysis identifies potential effects to biological resources that could result from implementation of the proposed Project. This document evaluates the Project in relation to issues listed under CEQA Guidelines Appendix G, Section IV, and the County Guidelines for Determining Significance [for] Biological Resources, Third Revision (2009a) under CEQA and RPO (2007).

Project impacts are categorized pursuant to CEQA as direct, indirect, or cumulative impacts.

- CEQA Guidelines §15358 (a) (1) and (b) (Title 14, Chapter 3, Article 20) defines a "direct impact or primary effect" as "effects which are caused by the project and occur at the same time and place" and relate to a "physical change" in the environment.
- CEQA Guidelines §15358 (a) (2) and (b) (Title 14, Chapter 3, Article 20) defines an "indirect impact or secondary effect" as "effects which are caused by the project and are later in time or farther removed in distance, but are still reasonably foreseeable" and relate to a "physical change" in the environment.
- CEQA Guidelines §15355 (Title 14, Chapter 3, Article 20) defines "cumulative impacts" as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts."

Direct, indirect, and cumulative impacts can be described as either permanent or temporary. Permanent impacts are generally defined as effects that would result in an irreversible loss of biological resources; temporary impacts can be defined as effects that could be restored, thus providing habitat and wildlife functions and values effectively equal to the functions and values that existed before the area was impacted.

CEQA Guidelines §15370 (Title 14, Chapter 3, Article 20) defines "mitigation" as:

- "Avoiding the impact altogether by not taking a certain action or parts of an action."
- "Minimizing impacts by limiting the degree or magnitude of the action and its implementation."
- "Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment."
- "Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action."

- "Compensating for the impact by replacing or providing substitute resources or environments."

This Project includes design measures to avoid impacts. Potential Project effects and avoidance measures were evaluated based on examination of the Dead, Dying and Diseased Tree Removal Program activities proposed within the operation units in the context of the biological resources documented during the field surveys and those resources assessed as having a likely potential to occur in the project area. The EIR addresses all of the potential environmental impacts of the removal of dead, dying and diseased trees within specific mapped areas in the Greater Julian area along major evacuation corridors, the Descanso and Pine Valley evacuation corridors along Highway 79 and Old Highway 80 in the Cuyamaca Laguna area, as well as the removal of dead eucalyptus trees from the San Dieguito River below Lake Hodges Dam. The information presented here provides additional details to be included in the EIR.

3.0 SPECIAL STATUS SPECIES

3.1. Guidelines for the Determination of Significance

Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS?

An impact would be determined significant per the County Guidelines for Determining Significance [for] Biological Resources (2009b) if implementation of the proposed project would result in any of the following conditions:

A. The project would impact one or more individuals of a species listed as federally or state endangered or threatened;
B. The project would impact the regional long-term survival of a County Group A or B plant species, or a County Group I animal species, or a species listed as a state Species of Special Concern;
C. The project would impact the regional long-term survival of a County Group C or D plant species, or a County Group II animal species;
D. The project may impact arroyo toad (*Bufo californicus*) aestivation or breeding habitat;
E. The project would impact golden eagle habitat;
F. The would result in loss of functional foraging habitat for raptors;
G. The project would increase noise and/or nighttime lighting to a level above ambient proven to adversely affect sensitive species;
H. The project would impact the viability of a core wildlife area, defined as a large block of habitat (typically 500 acres or more not limited to project boundaries, though smaller areas with particularly valuable resources may also be considered a core wildlife area) that supports a viable population of a sensitive wildlife species or an area that supports multiple wildlife species;
I. The project would increase human access or predation or competition from domestic animals, pests or exotic species to levels that would adversely affect sensitive species; or
J. The project would impact the nesting success of the coastal cactus wren (*Campylorhynchus brunneicapillus*), coastal California gnatcatcher (*Polioptila californica californica*), least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), tree-nesting raptors, ground-nesting raptors, golden eagle, or light-footed clapper rail (*Rallus longirostris levipes*) through grading, clearing, fire fuel modification, and/or other noise generating activities such as construction.

3.2. Analysis of Project Effects

A. The Project would not result in impacts to any known occurrences of federally or state listed, endangered or threatened species since none were identified on the APNs/operation units surveyed. The bald eagle (*Haliaeetus leucocephalus*) may spend portions of winter months in the vicinity of Cuyamaca Lake but the temporary, localized nature of removing the dead, dying and diseased trees would not likely affect this species. The other listed species assessed for potential occurrence within the parcels/operation units (see Appendices 7 and 8) either: 1) are not expected to occur in the project area based on a lack of potentially suitable habitat or the project area being located outside of the species' range; or 2) would not likely incur impacts since no trees were marked for removal within

the immediate vicinity of potentially suitable habitat located within or adjacent to designated operation units (i.e., for plants, invertebrates, fish, and amphibians).

B. Project affects on those County Group A or B sensitive plant species (e.g., golden violet) and County Group I sensitive animal species (e.g., red-shouldered hawk and purple martin) identified within designated operation units would vary by species. Overall reduction in density of forest trees may be considered a beneficial action due to the unnatural densities previously described (see Introduction). It is unlikely that substantial impacts would occur to golden violet on APNs 250-150-01 and 250-150-15 as a result of the species' habitat requirements (i.e., sandy slopes) where trees are not planned to be removed. In addition, although red-shouldered hawk was observed flying over the Project Area, no large raptor nests were identified during the biological surveys, and one tree marked for removal on APN 294-012-20 with an identified active nest for purple martin was designated as a wildlife tree and has been flagged with "do-not-cut" tape. Potential impacts to these species would not be considered to have a substantial adverse effect on the species' regional long-term survival.

C. Project affects on those County List D sensitive plant species (e.g., southwestern spiny rush and bluish-spike moss) and County Group 2 sensitive animal species (e.g., turkey vulture, mountain quail, western bluebird, southern mule deer, and mountain lion) identified within designated operation units would also vary by species. It is unlikely that substantial impacts would occur to southwestern spiny rush on APN 407-100-50 and bluish-spike moss on APNs 250-020-08, 250-111-08, 250-150-01, and 250-150-16 as a result of the species' habitat requirements (i.e., freshwater marsh and granitic rock, respectively) where trees would not be removed. In addition, the turkey vulture nests in cliffs and overhangs, the mountain quail nests mostly in chaparral lands, and the western bluebird nests on edges of meadows and openings where tree removal would also be limited. Larger mammals such as southern mule deer and mountain lion could be temporarily displaced from localized areas for a few days while trees are being removed. Potential impacts to these species would not be considered to have a substantial adverse effect on the species' regional long-term survival.

D. The Project would not result in impacts to arroyo toad aestivation or breeding habitat since this species is not expected to occur in the project area based on a lack of potentially suitable habitat.

E and J. Adherence to the California Forest Practice Rules, as noted below, would ensure that the removal of dead, dying and diseased trees would avoid potential impacts to the nesting success of those special status birds with a potential to occur in the Project Area [e.g., golden eagle (*Aquila chrysaetos*) and tree-nesting raptors].

F, G, H, and I. The temporary, localized nature of effects incurred from Project fuel modification activities (i.e., strategic dead tree removal) would not result in a loss of functional foraging habitat for raptors or viability of a core wildlife area; rather wildlife could benefit from the opening of the tree canopy. In addition, Project activities would occur during the day and would not increase noise, nighttime lighting, human access, or predation or competition from domestic animals, pests or exotic species to levels that would adversely affect sensitive species.

3.3. Avoidance Measures and Design Considerations

All trees located within areas identified through the biological surveys or through review by USFWS and CDFG staff to support sensitive species of plants and animals under the County list of sensitive

species will be eliminated from the Dead, Dying and Diseased Tree Removal and left in an undisturbed state.

All trees marked for removal shall be inspected (including branches and cavities) by a qualified biologist for the presence of active nests immediately prior to felling, and if an active nest is detected, then removal of the tree(s) shall be avoided until after the breeding season, which is defined by the County (2009b) as February 15th to August 31st. If the tree is considered a wildlife tree, it will be marked as a no cut tree.

3.4. Conclusions

Implementation of the aforementioned avoidance measure would minimize potential effects on special status species to a level less than significant under CEQA.

4.0 RIPARIAN HABITAT OR SENSITIVE NATURAL COMMUNITIES

4.1. Guidelines for the Determination of Significance

Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFG or USFWS?

An impact would be determined significant per the County of San Diego Guidelines for Determining Significance [for] Biological Resources (2009b), if implementation of the proposed project would result in any of the following conditions:

A. Project-related construction, grading, clearing, construction or other activities would temporarily or permanently remove sensitive native or naturalized habitat on or off the project site.
B. Any of the following would occur to or within jurisdictional wetlands and/or riparian habitats as defined by the Army Corps of Engineers (ACOE), CDFG and the County of San Diego: removal of vegetation; grading; obstruction or diversion of water flow; adverse change in velocity, siltation, volume of flow, or runoff rate; placement of fill; placement of structures; construction of a road crossing; placement of culverts or other underground piping; any disturbance of the substratum; and/or any activity that may cause an adverse change in native species composition, diversity and abundance.
C. The project would draw down the groundwater table to the detriment of groundwater-dependent habitat, typically a drop of three feet or more from historical low groundwater levels.
D. The project would increase human access or competition from domestic animals, pests or exotic species to levels proven to adversely affect sensitive habitats.
E. The project would not include a wetland buffer adequate to protect the functions and values of existing wetlands.

4.2. Analysis of Project Effects

A and B. Tree removal under the Dead, Dying and Diseased Tree Removal Program would occur in forested and urban areas, thus the woodland and forest habitat within the vicinity of existing urban structures would incur permanent, direct change. These effects would be considered positive and Adherence to the California Forest Practice Rules, as noted below, would minimize potential adverse effects to a level less than significant under CEQA.

In most cases, the numbers of trees removed would have little overall effect on the openness of the canopy. In the few locations where it may open the canopy, the effects, if any, would cause very limited change in soil chemistry. The decay of the dead trees would eventually generate openings in the canopy either in the absence of this program or through a wildfire event that would have much greater biological impacts. The removal of dead trees could also result in very limited indirect effects to the horizontal and vertical structural components of the forested habitats; however, the die off of vegetation due to drought and bark beetle infestation has already contributed to this effect. The extent of changes in the overstory and understory would vary by site but would generally be very limited. Some opportunistic and primary successional plant species would benefit from these changes while other species would incur adverse effects. These effects could result in changes to species composition (i.e., the opening up of stands would favor sun-loving species and discourage shade-loving species), which could reflect new vegetation types and fragmentation of existing vegetation types. Due to the patchy nature of the die-off, these effects would occur in a mosaic

pattern and in most locations, at a very low level. These fluctuations in species occurrences and population levels are considered natural, and would not be significantly affected by the Project. Furthermore, since the trees are already dead or near death, they would eventually fall and decay unassisted resulting in a change in structure of the vegetation in the absence of this Program. Thus, the effects of this Program on these systems to accelerate the removal of the dead trees are minimal to non-existent.

C and E. The Project has been designed to implement the WLPZ limitations and procedures, as required by the California Forest Practice Rules and noted below, which would protect the functions and values of existing wetlands.

D. The temporary, localized nature of effects incurred from Project fuel modification activities (i.e., strategic dead tree removal) would not increase human access or predation or competition from domestic animals, pests or exotic species to levels that would adversely affect sensitive species.

4.3. Avoidance Measures and Design Considerations

The operator shall inspect all equipment and remove the propagules of weed species prior to entering the Project Area in accordance with the USFS Guide to Noxious Weed Prevention Practices.

All vehicles and heavy equipment shall remain within pre-existing roads, trails, and parking areas to the extent practical.

All trees marked for removal along grassland and meadow edges, or intergraded within scrub or chaparral habitat shall be felled away from these habitats (where feasible), with logs removed (e.g., skid trails) through the least biologically sensitive area(s).

All tree removal shall follow WLPZ limitations and procedures in the California Forest Practice Rules.

All temporary routes, landings and skid trails shall be rehabilitated and blocked after Project completion, using a combination of natural barriers (e.g., rocks, logs, etc.) and/or signage; and all existing fences or barriers should be repaired to prevent/discourage unauthorized vehicle activity during and after Project treatment.

4.4. Conclusions

Implementation of the aforementioned avoidance measures would minimize potential adverse effects to riparian habitat or sensitive natural communities to a level less than significant under CEQA.

5.0 WILDLIFE MOVEMENT AND NURSERY SITES

5.1. Guidelines for the Determination of Significance

Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

An impact would be determined significant per the County of San Diego Guidelines for Determining Significance for Biological Resources (2009b) if implementation of the proposed project would result in any of the following conditions:

A. The project would prevent wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their reproduction.
B. The project would substantially interfere with connectivity between blocks of habitat, or would potentially block or substantially interfere with a local or regional wildlife corridor or linkage.
C. The project would create artificial wildlife corridors that do not follow natural movement patterns.
D. The project would increase noise and/or nighttime lighting in a wildlife corridor or linkage to levels proven to affect the behavior of the animals identified in a site-specific analysis of wildlife movement.
E. The project would not maintain an adequate width for an existing wildlife corridor or linkage and/or would further constrain an already narrow corridor through activities such as (but not limited to) reduction of corridor width, removal of available vegetative cover, placement of incompatible uses adjacent to it, and placement of barriers in the movement path.
F. The project would not maintain adequate visual continuity (i.e., long lines-of-site) within an existing wildlife corridor or linkage.

5.2. Analysis of Project Effects

A, B, and D. The dead, dying and diseased tree removal process would be of short duration located within a limited area along existing evacuation corridors and would only take place during daylight hours. Thus, activities to remove dead, dying and diseased trees would not disrupt wildlife nocturnal activities or substantially interfere with wildlife movement. Adherence to the California Forest Practice Rules, as noted below, would further ensure that that the Dead, Dying and Diseased Tree Removal Program would not prevent wildlife access to foraging or breeding habitat, water sources, or other areas necessary for reproduction.

C, E, and F. The temporary, localized nature of effects incurred from the removal of dead, dying and diseased trees would not create artificial wildlife corridors or substantially affect existing wildlife movement routes through habitat.

5.3. Avoidance Measures and Design Considerations

All trees marked for removal shall be inspected (including branches and cavities) by a qualified biologist for the presence of active nests immediately prior to felling, and if an active nest is detected, then removal of the tree(s) shall be avoided until after the breeding season, defined by the County (2009b) as February 15th to August 31st.

If a designated wildlife tree were subsequently determined to be a hazard tree, the wildlife value of the tree will be assessed by the USFWS and CDFG to determine if the tree should not be cut.

All tree removal shall follow WLPZ limitations and procedures in the California Forest Practice Rules.

5.4. Conclusions

Implementation of the aforementioned avoidance measures would minimize potential adverse effects to wildlife movement and nursery sites to a level less than significant under CEQA.

6.0 LOCAL POLICIES, ORDINANCES, AND ADOPTED PLANS

6.1. Guidelines for the Determination of Significance

Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

A. For lands outside of the MSCP, the project would impact coastal sage scrub (CSS) vegetation in excess of the County's 5% habitat loss threshold as defined by the Southern California Coastal Sage Scrub Natural Communities Conservation Planning Process (NCCP) Guidelines.

B. The project would preclude or prevent the preparation of the subregional Natural Communities Conservation Planning Process (NCCP). For example, the project proposes development within areas that have been identified by the County or resource agencies as critical to future habitat preserves.
C. The project will impact any amount of wetlands or sensitive habitat lands as outlined in the Resource Protection Ordinance (RPO).
D. The project would not minimize and/or mitigate coastal sage scrub habitat loss in accordance with Section 4.3 of the Natural Communities Conservation Planning Process (NCCP) Guidelines.
E. The project does not conform to the goals and requirements as outlined in any applicable Habitat Conservation Plan (HCP), Habitat Management Plan (HMP), Special Area Management Plan (SAMP), Watershed Plan, or similar regional planning effort.
F. For lands within the Multiple Species Conservation Program (MSCP), the project would not minimize impacts to Biological Resource Core Areas (BRCAs), as defined in the Biological Mitigation Ordinance (BMO).
G. The project would preclude connectivity between areas of high habitat values, as defined by the Southern California Coastal Sage Scrub Natural Communities Conservation Planning Process (NCCP) Guidelines.
H. The project does not maintain existing movement corridors and/or habitat linkages as defined by the Biological Mitigation Ordinance (BMO).
I. The project does not avoid impacts to MSCP narrow endemic species and would impact core populations of narrow endemics.
J. The project would reduce the likelihood of survival and recovery of listed species in the wild.
K. The project would result in the killing of migratory birds or destruction of active migratory bird nests and/or eggs (Migratory Bird Treaty Act).
L. The project would result in the take of eagles, eagle eggs or any part of an eagle (Bald and Golden Eagle Protection Act).

6.2. Analysis of Project Effects

A, C, and D. Wetlands, Diegan coastal sage scrub, and mafic northern mixed chaparral habitat located within designated operation units are not proposed to be affected under the Dead, Dying and Diseased Tree Removal Program, and thus would not incur significant impacts.

B and G. As stated in section 5.0 of this report above, the Dead, Dying and Diseased Tree Removal Program will not preclude connectivity between areas of high habitat values or preclude preparation of the East County MSCP Subarea Plan.

E, F, H, and I. The Project Area is not located within an adopted MSCP Plan Subarea.

J, K, and L. Adherence to the California Forest Practice Rules, as noted below, would ensure that trees with active breeding bird nests would be avoided under the Dead, Dying and Diseased Tree Removal Program.

6.3. Avoidance Measures and Design Considerations

All trees marked for removal shall be inspected (including branches and cavities) by a qualified biologist for the presence of active nests immediately prior to felling, and if an active nest is detected, then removal of the tree(s) shall be avoided until after the breeding season, which is defined (County 2009b) as February 15th to August 31st.

6.4. Conclusions

Implementation of aforementioned avoidance measure would ensure compliance with the regulatory requirements of the California Forest Practice Rules, Federal MBTA, Bald and Golden Eagle Protection Act and California Fish and Game Codes §3503 and §3513.

7.0 CUMULATIVE IMPACT ANALYSIS

The Project Area contains past, present, and reasonably foreseeable probable future projects, including uses such as timber harvesting, recreation, agricultural and residential uses, and scientific study. The Project would not have a reasonable potential to cause or add to significant cumulative impacts for biological resources after implementation of the aforementioned avoidance measures through application of California Forest Practice Rules (CalFire 2010), which would avoid and minimize impacts to a level less than significant under CEQA.

8.0 REFERENCES

Allen, C. D., M. Savage, D. A. Falk, K. F. Suckling, T. W. Swethnam, T. Schulke, P. B. Stacey, P.l Morgan, M. Hoffman, and J. T. Klingel 2002. Ecological restoration of southwestern ponderosa pine ecosystems: A broad perspective. *Ecological Applications* 12:1418–1433.

American Ornithologists' Union. 1998. Check-list of North American Birds, 7th ed. American Ornithologists' Union, Washington D.C.

_____. 2009. Fiftieth Supplement to the American Ornithologists' Union *Check-list of North American Birds* [Internet]. Auk 126(3):705-714. Available from: http://www.aou.org/checklist/north/index.php.

California Department of Fish and Game (CDFG). 2009a. California Natural Diversity Database (CNDDB). Biogeographic Data Branch. RareFind 3; GIS shapefile update CD, April 2, 2009. Sacramento, California.

____. 2009b. Protocols for Surveying and Evaluating Impacts to Species Status Native Plant Populations and Natural Communities [Internet]. 7 pp. Available from: http://www.dfg.ca.gov/habcon/plant/.

_____. 2009c Jul. Special Animals [Internet]. Natural Diversity Database. 50 pp + Endnotes. Available from: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/SPAnimals.pdf.

_____. 2010a. Life History Accounts and Range Maps [Internet]. California Wildlife Habitat Relationships System. Edited by Zeiner DC, et al. 1988-1990, updated. Available from: http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx.

_____. 2010b Jan. State and Federally Listed Endangered & Threatened Animals of California [Internet]. Natural Diversity Database. 16 pp. Available from: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/TEAnimals.pdf.

_____. 2010c Apr. Special Vascular Plants, Bryophytes, and Lichens List [Internet]. Natural Diversity Database. Quarterly publication. 71 pp. Available from: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/SPPlants.pdf.

_____. 2010d Apr. State and Federally Listed Endangered & Threatened Plants of California [Internet]. Natural Diversity Database. 16 pp. Available from: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/TEAnimals.pdf.

California Department of Forestry and Fire Protection (CalFire). 2010. California Forest Practice Rules [Internet]. California Code of Regulations (CCR), Chapters 4, 4.5 and 10 with the Z'Berg-Nejedly Forest Practice Act; Pertinent Excerpts from Protection of Forest, Range and Forage Lands – Prohibited Activities and the Wild and Scenic Rivers Act; the Professional Foresters Law and Registration of Professional Foresters Rules, and with information related to Forest Roadbed Materials. Prepared for California Licensed Timber Operators and California Registered Professional Foresters. Available from: http://www.fire.ca.gov/resource_mgt/resource_mgt_forestpractice.php.

California Native Plant Society (CNPS). 2010. Inventory of Rare and Endangered Plants (on-line edition, v7-10a) [Internet]. California Native Plant Society. Sacramento, CA. Available from: http://www.cnps.org/inventory..

California Office of Administrative Law. 2010a. California Environmental Quality Act (CEQA) Guidelines. California Code of Regulations (CCR), Title 14, Division 6, Chapter 3, section 15000 et seq. [Internet]. Available from: http://ccr.oal.ca.gov/linkedslice/default.asp?SP=CCR-1000&Action=Welcome.

_____. 2010b. Forest Practices. California Code of Regulations (CCR), Title 14, Division 1.5, Chapter 4 [Internet]. Available from: http://ccr.oal.ca.gov/linkedslice/default.asp?SP=CCR-1000&Action=Welcome.

California Office of Legislative Council. 2009. California Environmental Quality Act (CEQA) Statute. California Public Resources Code, Division 13, Chapter 1, section 21000 et seq. [Internet]. Available from: http://www.leginfo.ca.gov/calaw.html.

_____. 2009. California Fish and Game Code, Division 4, Part 2, Chapter 1, sections 3503 and 3015 [Internet]. Available from: http://www.leginfo.ca.gov/calaw.html.

County of San Diego. 2007. Resource Protection Ordinance (No. 9482) [Internet]. Adopted 1989, Amended 1991, 2007. 18pp. Available from: http://sdcounty.ca.gov/dplu/docs/res_prot_ord.pdf.

_____. 2009a May 13. Filing of Notice of Exemption (NOE) in Compliance with Public Resources Code Section 21108 or 21152 under the California Environmental Quality Act (CEQA) for the San Diego County Hazardous Fuels Reduction Project. 2 pp + Attachments A through D.

_____. 2009b June. Guidelines for Determining Significance and Report Format and Content Requirements [for] Biological Resources, Third Revision [Internet]. Land Use and Environment Group; Department of Planning and Land Use; Department of Public Works. 61pp. Available from: http://www.sdcounty.ca.gov/dplu/docs/Biological_Guidelines.pdf.

_____. 2009c June. Report Format and Content Requirements [for] Biological Resources, Third Revision [Internet]. Land Use and Environment Group; Department of Planning and Land Use; Department of Public Works. 58pp. Available from: http://www.sdcounty.ca.gov/dplu/index.html.

_____. 2009d June. Sensitive Plant and Animal Lists [Internet]. Available from County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements [for] Biological Resources, Third Revision (Tables 2 and 3): http://www.sdcounty.ca.gov/dplu/docs/Biological_Guidelines.pdf.

_____. 2010. East County MSCP Plan [Internet]. Available from: http://www.sdcounty.ca.gov/dplu/mscp/ec.html.

Crother BI (ed.). 2000 (2001). Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico, with Comments Regarding Confidence in Our Understanding. SSAR Herpetological Circular 29.iii +82 pp.

Crother BI, Boundy J, Campbell JA, De Quieroz K, Frost D, Green DM, Highton R, Iverson JB, McDiarmid RW, Meylan PA, Reeder TW, Seidel ME, Sites JW Jr., Tilley SG, Wake DB. 2003. Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico: Update. Herpetological Review 2003, 34(3), 196-203.

Franklin J, Spears-Lebrun L, Deutschman D, Marsden K. 2006. Impact of a high-intensity fire on mixed evergreen and mixed conifer forests in the Peninsular Ranges of southern California, USA, Forest Ecology and Management 235: 18-29.

Goforth BR and Minnich RA. 2008. Densification, stand-replacement wildfire, and extirpation of mixed conifer forest in Cuyamaca Rancho State Park, southern California. Forest Ecology and Management 256: 36–45.

Hall ER. 1981. The mammals of North America. 2nd Edition. John Wiley & Sons. New York, New York. Two volumes. 1,181 pp.

Holland RF. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. Nongame-Heritage Program, State of California, Resources Agency, Department of Fish and Game. Sacramento, California. 157 pp.

Keeley JE, Fotheringham CJ, Moritz MA. 2004. Lessons from the 2003 wildfires in southern California. Journal of Forestry 102(7):26-31.

Keeley JE, Safford H, Fotheringham CJ, Franklin J, Moritz M. 2009. The 2007 Southern California wildfires: Lessons in complexity, Journal of Forestry 107:287-296.

Klein MW, San Diego Natural History Museum. 2002. Butterflies of San Diego County [Internet]. Available from: http://www.sdnhm.org/research/entomology/sdbutterflies.html.

Minnich RA, Barbour MG, Burk JH, Fernau RF. 1995. Sixty years of change in Californian conifer forests of the San Bernardino Mountains. *Conservation Biology* 9:902–914.

Oberbauer TA. 2007. Loss of 500 year old sugar pines during October 2003 fire storms. Fremontia 35:18-23.

Oberbauer T, Kelly M, Buegge J. 2008, Revised 1996 and 2006. Draft Vegetation Communities of San Diego County [Internet]. Based on "Preliminary Descriptions of the Terrestrial Natural Communities of California", Holland RF, PhD., 1986. Available from: http://www.sdcounty.ca.gov/dplu/docs/Veg_Comm_SDCounty_2008.pdf.

Rebman JP, Simpson MG. 2006. Checklist of the Vascular Plants of San Diego County, 4th Edition [Internet]. ISBN 0-918969-05-0. Available from: http://www.sdnhm.org/research/botany/sdplants/index.html.

Reiser CH. 2001 February. Rare Plants of San Diego County. Aquafir Press. 2001 edition. 299 pp.

San Diego Geographic Information Source (SanGIS). 2003a. Ecology, Ecologic Subregions, Ecology_Subregions Download (zip) updated 10/25/2003 [Internet]. Available from: http://www.sangis.org/.

_____. 2003b Fire, Fire_Perimeter_Cedar Download (zip) 12/17/2003 [Internet]. Available from: http://www.sangis.org/.

_____. 2003c. Hydrology, Basins & Watersheds, Hyd_Basins Download (zip) updated 6/5/2003 [Internet]. Available from: http://www.sangis.org/.

_____. 2003d. Miscellaneous, National Forests, National_Forests Download (zip) updated 10/27/2003 [Internet]. Available from: http://www.sangis.org/.

_____. 2007a. Ecology, Vegetation Download (zip) updated 4/9/2007 [Internet]. Available from: http://www.sangis.org/.

_____. 2007b Fire, Firestorm_2007_Perimeters Download (zip) 11/3/2007 [Internet]. Available from: http://www.sangis.org/.

_____. 2009. Parcels and Lots Download (zip) updated 4/1/2009 [Internet]. Available from: http://www.sangis.org/.

Unitt P. 2007. San Diego County Bird Atlas Google™ Earth [Internet]. San Diego Natural History Museum. Available from: http://www.sdnhm.org/ge_files/birdatlasguide.pdf.

U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). 2007. Soil Survey Geographic (SSURGO) database for San Diego County, California [Internet]. Natural Resources Conservation Service (NRCS). Available from: http://SoilDataMart.nrcs.usda.gov/.

U.S. Geological Survey (USGS). 1998. Santa Ysabel, Julian, Cuyamaca Peak and Descanso Quadrangles, California; California Digital Raster Graphics, 7.5 Minute (0) Series, Albers NAD 27. Teale Data Center. Sacramento, California.

_____. 2005. Preliminary Integrated Geological Map Databases for the United States; Western States: California, Nevada, Arizona, Washington, Oregon, Idaho, and Utah. Version 1.2. GIS Data Download California (zip) [Internet]. Available from: http://pubs.usgs.gov/of/2005/1305/#CA.

U.S. Fish and Wildlife Service (USFWS). 2010a. Carlsbad Fish and Wildlife Office, GIS Division Species Occurrence Data Download (zip) updated 5/12/2010 [Internet]. Available from: http://www.fws.gov/carlsbad/giswebpage/giswebpage.

_____. 2010b. Critical Habitat Portal [Internet]. Available from: http://criticalhabitat.fws.gov/.

U.S. Forest Service (USFS). 2001. Guide to Noxious Weed Prevention Practices [Internet]. Version 1. Available from: http://www.fs.fed.us/invasivespecies/documents/FS_WeedBMP_2001.pdf.

Wilson DE, Reeder DM (eds). 2005. Mammal Species of the World. Johns Hopkins University Press. 2,142 pp. Available from Johns Hopkins University Press at: 1-800-537-5487 or (410) 516-6900, or http://www.press.jhu.edu/ or http://nmnhgoph.si.edu/msw/.

9.0 PREPARER(S) AND PERSONS/ORGANIZATIONS CONTACTED

Merkel & Associates, Inc.

Keith Merkel, County Approved Principal Biological Consultant, Report QA/QC Review

Diana Jensen, County Approved Senior Biologist, Project Manager and Primary Report Author

Mary Tamburro, Lead Associate Field Biologist and Contributing Report Author

Brad Kelly, GIS Specialist, Field Technician and Graphics Preparation/Numeric Analyses

Bonnie Peterson, Senior Field Biologist

Edward Ervin, Associate Field Biologist

Joe Thompson, Associate Field Biologist

Heather Krish, Biological Field Technician

James Schacher, Biological Field Technician

Jimmy Reeves, Biological Field Technician

Lee Murai, GIS Specialist, Field Technician

APPENDIX 1. SURVEY DATES AND CONDITIONS

APN	Date	Conditions (start to end)	Biologist(s)
250-020-18 250-020-19 (A)	2010 Apr 13	Weather: 15-25% cc Wind: 2-2 BS Temperature: 55-58° F	Edward Ervin Bonnie Peterson
250-111-08 250-180-19 250-180-20 250-180-30 291-122-17	2010 Apr 15	Weather: 5-90% cc Wind: 4-1 BS Temperature: 62-65° F	Edward Ervin Bonnie Peterson
250-150-01 250-150-15 250-150-16 250-208-05 250-211-14 250-211-26 250-211-27 250-211-28 250-211-30 250-213-03 250-213-04 250-213-05 250-214-02 250-214-04 250-214-06 250-214-24 250-220-02 291-150-02 291-150-03 291-150-04 291-150-06 291-150-10 291-160-08 291-160-14 291-370-27 291-380-07 291-420-01	2010 Apr 19	Weather: 0-60% cc Wind: 2-3 BS Temperature: 62-68° F	Mary Tamburro Heather Krish Edward Ervin Jimmy Reeves
250-020-07 250-200-01 250-202-01 250-202-03 250-202-06 250-202-09 250-202-10 250-202-12 250-202-15 250-202-16 250-203-01	2010 Apr 21	Weather: 100-100% cc Wind: 1-3 BS Temperature: 35-35° F	Mary Tamburro Heather Krish Edward Ervin Bonnie Peterson

APN	Date	Conditions (start to end)	Biologist(s)
250-203-02 250-203-07 250-205-01 250-205-06 250-205-07 250-205-08 250-206-03 250-206-07 250-206-08 250-207-03 250-207-12 250-207-13 250-207-14 250-207-15 250-207-17 250-207-18 250-208-01 250-208-07 250-208-14 250-208-26 250-209-01 250-209-02 250-209-04 250-212-07 250-212-09 250-212-10 250-212-12 250-212-13 250-212-16 250-212-18 250-212-19 250-212-42 250-212-51	2010 Apr 21 continued		
250-162-08 250-163-02 250-163-07 250-163-09 250-163-10 250-163-14 250-163-15 250-163-24 250-164-13 250-164-19 250-164-24 250-170-03 250-170-05 250-200-07	2010 Apr 26	Weather: 0-0% cc Wind: 0-0 BS Temperature: 70-70° F	Mary Tamburro Joe Thompson

APN	Date	Conditions (start to end)	Biologist(s)
250-200-08 250-204-02 250-204-03 250-204-05 250-204-10 250-206-11 250-206-15 250-207-07 250-207-08 250-207-09 250-207-10 250-211-01 250-211-03 250-211-04 250-211-05 250-211-07 250-211-25 250-211-40 250-211-42	2010 Apr 26 continued		
250-110-03 250-110-38 250-110-39 250-120-28 250-120-72 250-120-81 250-120-84 250-120-85 250-130-03 250-130-22 250-130-23 250-150-02 250-150-07 250-150-09 250-150-21 250-150-23 250-161-01 250-161-12 291-131-06	2010 Apr 27	Weather: 0-15% cc Wind: 1-2 BS Temperature: 65-70° F	Mary Tamburro Joe Thompson
250-100-25 250-110-35 250-110-43 250-111-04 250-111-05 250-111-06 250-111-07	2010 Apr 29	Weather: 100-80% cc Wind: 4-1 BS Temperature: 50-60° F	Joe Thompson Heather Krish

APN	Date	Conditions (start to end)	Biologist(s)
250-020-03 250-020-05 250-020-08 250-020-10 (A ½) 250-020-19 (B) 250-110-22 250-130-09 250-130-15 250-162-14 250-162-16 250-170-01 291-370-08	2010 Apr 30	Weather: 0-60% cc Wind: 1-1 BS Temperature: 54-72° F	Edward Ervin Jimmy Reeves Joe Thompson Heather Krish
250-020-14 250-080-45 250-100-06 250-100-13 250-100-16 250-100-17 250-100-18 250-100-19 250-100-24 250-150-18 250-150-19	2010 May 4	Weather: 0-0% cc Wind: 0-1 BS Temperature: 61-70° F	Mary Tamburro Heather Krish
250-020-10 (A ½) 250-100-02 250-100-07	2010 May 5	Weather: 0-10% cc Wind: 1-2 BS Temperature: NR-65° F	Edward Ervin Heather Krish
248-050-03 248-050-06 248-050-15 248-050-25 248-060-10 248-060-11 248-060-14 248-060-15 248-060-33 248-060-34 248-160-02 248-230-08 248-230-11 248-241-01 248-241-02 248-241-03 248-241-05	2010 May 6	Weather: 0-0% cc Wind: 2-2 BS Temperature: 65-78° F	Edward Ervin Heather Krish Bonnie Peterson Lee Murai

APN	Date	Conditions (start to end)	Biologist(s)
250-070-09 291-010-12 291-010-16 291-010-17 291-010-18 291-010-26 291-022-01 291-022-02 291-022-05 291-023-02 291-023-10 291-023-24 291-023-30 291-023-31 291-023-32 291-032-01	2010 May 7	Weather: 0-0% cc Wind: 1-1 BS Temperature: 65-70° F	Edward Ervin Heather Krish
291-121-12 291-122-11 291-170-18 291-170-30 291-170-31 291-171-09 291-171-10 291-171-12 292-011-29 292-011-30 292-051-19 292-051-27 292-051-34 292-051-35	2010 May 10	Weather: 40-0% cc Wind: 2-2 BS Temperature: 50-60° F	Mary Tamburro Heather Krish
292-042-04 292-042-07 292-042-08 292-042-09 292-042-19 292-042-20 292-054-41 292-054-44 292-054-45 292-054-48 292-054-49 292-055-01 292-055-28 292-055-29 292-056-04 292-056-09 292-057-05	2010 May 11	Weather: 100-90% cc Wind: 1-2 BS Temperature: 48-48° F	Mary Tamburro Heather Krish

APN	Date	Conditions (start to end)	Biologist(s)
292-058-03 292-058-04 292-079-11 292-079-12 292-079-13 292-079-14	2010 May 11 continued		
248-160-06 248-160-20 248-160-28 248-180-22 248-180-27 248-190-15 248-190-23 289-060-01 291-010-19 291-010-20 291-010-21	2010 May 12	Weather: 0-0% cc Wind: 1-1 BS Temperature: 58-63° F	Edward Ervin Heather Krish
291-032-03 291-032-04 291-032-05 291-040-01 291-040-09 291-040-10 291-040-27 291-040-32 291-040-33 291-040-34 294-011-75 294-012-02 294-012-03 294-012-09 294-012-13 294-012-18 294-012-19 294-012-20 294-012-32	2010 May 13	Weather: 0-0% cc Wind: 1-2 BS Temperature: 60-74° F	Edward Ervin Heather Krish Joe Thompson James Schacher
292-041-28 292-140-09 292-140-10 294-011-52 294-011-55 294-012-22 294-012-25 294-012-28 294-012-29 294-030-03	2010 May 14	Weather: 0-0% cc Wind: 2-1 BS Temperature: 68-76° F	Edward Ervin Heather Krish Joe Thompson James Schacher

APN	Date	Conditions (start to end)	Biologist(s)
292-141-03 292-141-06 292-141-10 292-141-36 292-141-37 292-150-29 292-151-27	2010 Jun 1	Weather: 0-30% cc Wind: 2-2 BS Temperature: 65-72° F	Joe Thompson Jimmy Reeves
248-050-21 248-050-22 248-060-23 248-230-13 248-230-15 248-230-17 248-230-20 248-230-22 248-242-05	2010 Jun 3	Weather: 5-0% cc Wind: 1-3 BS Temperature: 74-79° F	Joe Thompson Heather Krish
248-060-01 248-060-03 248-060-26 248-210-02 248-210-03 291-040-51 291-072-09 292-011-33 292-011-34 292-042-15 292-042-17 292-042-18 292-140-30 292-140-39 292-140-40 292-140-41	2010 Jun 4	Weather: 0-0% cc Wind: 1-2 BS Temperature: 78-80° F	Joe Thompson Heather Krish
292-140-29 335-010-21 335-010-25 335-010-29 335-020-05 335-030-09 335-030-11	2010 Jun 9	Weather: 0-0% cc Wind: 1-3 BS Temperature: 75-78° F	Edward Ervin Brad Kelly
294-070-27 294-070-47 294-094-18 294-096-01 294-180-01 294-180-03 294-180-18	2010 Jun 10	Weather: 0-0% cc Wind: 3-2 BS Temperature: 70-74° F	Edward Ervin Lee Murai

APN	Date	Conditions (start to end)	Biologist(s)
335-020-06	2010 Jun 10 continued		
407-050-08 407-050-13 407-050-18 407-051-03 407-100-36 407-100-45 407-100-49 407-100-50 407-121-06 407-121-17 407-121-21	2010 Jun 15	Weather: 0-0% cc Wind: 0-0 BS Temperature: 78-80° F	Mary Tamburro Heather Krish
407-111-11 407-111-13 407-112-02 407-112-06 407-112-07 407-112-10 407-112-11 407-112-13 407-112-14 407-112-15 407-112-16 407-122-16 407-122-17 407-130-09 407-130-18 407-130-20 407-130-23 408-080-06 408-080-07 408-080-08 408-080-09 408-080-47 408-080-49 408-080-65 408-081-11 408-081-12 408-090-05 408-090-06 408-090-07 408-090-08	2010 Jun 16	Weather: 0-0% cc Wind: 0-1 BS Temperature: 78-85° F	Mary Tamburro Heather Krish
248-050-23 248-230-09 291-022-06	2010 Jun 17	Weather: 0-0% cc Wind: 0-2 BS Temperature: 75-80° F	Mary Tamburro Heather Krish

APN	Date	Conditions (start to end)	Biologist(s)
291-023-09 291-023-26 291-023-28 291-023-29 291-032-02 291-040-07 292-041-27 294-011-60 294-012-21	2010 Jun 17 continued		

cc = cloud cover; BS = Beaufort Scale; °F = degrees Fahrenheit; NR = not recorded

APPENDIX 2. HABITATS/VEGETATION TYPES BY APN

APN	Survey Area[1]	Vegetation Type (Holland/Oberbauer Code)/Existing Acres																			Total
		Urban/Developed (12000)	General Agriculture (18000)	Diegan Coastal Sage Scrub (32500)	Northern Mixed Chaparral (37130)	Mafic Northern Mixed Chaparral (37132)	Chamise Chaparral (37200)	Montane Chaparral (37500)	Non-Native Grassland (42200)	Foothill/Mountain Perennial Grassland (Code 42400)	Montane Meadow (45100)	Freshwater Marsh (52400)	Southern Riparian Forest (61300)	Southern Coast Live Oak Riparian Forest (61310)	Southern Riparian Scrub (63300)	Southern Willow Scrub (63320)	Coast Live Oak Woodland (71160)	Mixed Oak Woodland (77000)	Sierran Mixed Conifer Forest (84230)	Mixed Oak/Coniferous/Bigcone/Coulter Forest (84500)	Jeffrey Pine Forest (85100)	
Whispering Pines																					
250-020-03	EP						0.4						1.5							4.3		**6.2**
250-020-05	EP												0.7							0.1		**0.8**
250-020-07	EP				0.6															3.0		**3.6**
250-020-08	EP												1.3							0.1		**1.4**
250-020-10	A				2.2								5.2							11.6		**18.9**
250-020-14	A				1.5															3.2		**4.7**
250-020-18	A																			3.4		**3.4**
250-020-19	A/B			1.0			0.2				0.5		0.2							23.5		**25.4**
250-080-45	A																			0.5		**10.9**
250-100-02	EP							0.4						3.5						7.0		**5.7**
250-100-06	EP				0.7															5.0		**5.8**
250-100-07	EP				1.6															4.2		**4.6**
250-100-13	A																			4.5		**16.2**
250-100-16	EP				16.0															0.2		**32.3**
250-100-17	EP													4.6								**0.5**
250-100-18	A																			28.3		**8.7**
250-100-19	EP							0.8						1.6						6.3		**5.3**

APN	Survey Area[1]	Vegetation Type (Holland/Oberbauer Code)/Existing Acres																			Total
		Urban/Developed (12000)	General Agriculture (18000)	Diegan Coastal Sage Scrub (32500)	Northern Mixed Chaparral (37130)	Mafic Northern Mixed Chaparral (37132)	Chamise Chaparral (37200)	Montane Chaparral (37500)	Non-Native Grassland (42200)	Foothill/Mountain Perennial Grassland (Code 42400)	Montane Meadow (45100)	Freshwater Marsh (52400)	Southern Riparian Forest (61300)	Southern Coast Live Oak Riparian Forest (61310)	Southern Riparian Scrub (63300)	Southern Willow Scrub (63320)	Coast Live Oak Woodland (71160)	Mixed Oak Woodland (77000)	Sierran Mixed Conifer Forest (84230)	Mixed Oak/Coniferous/Bigcone/Coulter Forest (84500)	Jeffrey Pine Forest (85100)	
250-100-24	EP							1.8						2.3						1.2		**2.9**
250-100-25	EP																			2.9		**3.8**
250-110-03	EP																			3.8		**0.2**
250-110-22	EP																			0.2		**0.2**
250-110-35	EP																			0.2		**0.7**
250-110-38	EP																			0.7		**3.4**
250-110-39	EP																			4.3		**1.0**
250-110-43	EP																			0.4		**0.4**
250-111-04	EP																			3.3		**3.3**
250-111-05	A																			2.0		**2.0**
250-111-06	EP																			7.9		**7.9**
250-111-07	A																			7.7		**7.7**
250-111-08	EP																			3.8		**3.8**
250-120-28	EP																			0.3		**0.2**
250-120-72	EP																			0.4		**0.3**
250-120-81	EP								2.7													**0.4**
250-120-84	EP		2.6																			**2.7**
250-120-85	EP				0.6																	**2.6**

APN	Survey Area[1]	Vegetation Type (Holland/Oberbauer Code)/Existing Acres																			Total
		Urban/Developed (12000)	General Agriculture (18000)	Diegan Coastal Sage Scrub (32500)	Northern Mixed Chaparral (37130)	Mafic Northern Mixed Chaparral (37132)	Chamise Chaparral (37200)	Montane Chaparral (37500)	Non-Native Grassland (42200)	Foothill/Mountain Perennial Grassland (Code 42400)	Montane Meadow (45100)	Freshwater Marsh (52400)	Southern Riparian Forest (61300)	Southern Coast Live Oak Riparian Forest (61310)	Southern Riparian Scrub (63300)	Southern Willow Scrub (63320)	Coast Live Oak Woodland (71160)	Mixed Oak Woodland (77000)	Sierran Mixed Conifer Forest (84230)	Mixed Oak/Coniferous/Bigcone/Coulter Forest (84500)	Jeffrey Pine Forest (85100)	
250-130-03	A																			2.7		**0.6**
250-130-09	EP				0.2															0.6		**2.7**
250-130-15	A				0.4															1.5		**0.9**
250-130-22	A				0.3																	**0.4**
250-130-23	EP																			22.1		**1.7**
250-150-01	EP																			0.6		**22.1**
250-150-02	EP																			0.3		**0.6**
250-150-07	EP																			0.2		**0.3**
250-150-09	EP																			5.4		**0.2**
250-150-15	EP																			40.8		**5.4**
250-150-16	EP																			0.5		**40.8**
250-150-18	EP																			0.7		**0.5**
250-150-19	EP																			0.5		**0.7**
250-150-21	EP																			0.7		**0.5**
250-150-23	EP																			0.3		**0.7**
250-161-01	EP																			0.1		**0.3**
250-161-12	EP																			0.2		**0.4**
250-162-08	EP																			2.3		**0.2**

APN	Survey Area[1]	Vegetation Type (Holland/Oberbauer Code)/Existing Acres																			Total
		Urban/Developed (12000)	General Agriculture (18000)	Diegan Coastal Sage Scrub (32500)	Northern Mixed Chaparral (37130)	Mafic Northern Mixed Chaparral (37132)	Chamise Chaparral (37200)	Montane Chaparral (37500)	Non-Native Grassland (42200)	Foothill/Mountain Perennial Grassland (Code 42400)	Montane Meadow (45100)	Freshwater Marsh (52400)	Southern Riparian Forest (61300)	Southern Coast Live Oak Riparian Forest (61310)	Southern Riparian Scrub (63300)	Southern Willow Scrub (63320)	Coast Live Oak Woodland (71160)	Mixed Oak Woodland (77000)	Sierran Mixed Conifer Forest (84230)	Mixed Oak/Coniferous/Bigcone/Coulter Forest (84500)	Jeffrey Pine Forest (85100)	
250-162-14	EP																			0.6		**2.3**
250-162-16	EP																			0.2		**0.6**
250-163-02	EP																			0.3		**0.2**
250-163-07	EP																			0.2		**0.3**
250-163-09	EP																			0.2		**0.2**
250-163-10	EP																			0.2		**0.2**
250-163-14	EP																			0.2		**0.2**
250-163-15	EP																			0.6		**0.2**
250-163-24	EP																			0.3		**0.6**
250-164-13	EP																			0.1		**0.3**
250-164-19	EP																			0.2		**0.1**
250-164-24	EP				2.2								2.4							8.0		**0.2**
250-170-01	A																			1.1		**12.5**
250-170-03	EP																			0.1		**1.1**
250-170-05	EP																			6.9		**0.1**
250-180-19	EP																			1.8		**6.9**
250-180-20	A																			3.9		**1.8**
250-180-30	EP																			0.4		**3.9**

APN	Survey Area[1]	Vegetation Type (Holland/Oberbauer Code)/Existing Acres																			Total
		Urban/Developed (12000)	General Agriculture (18000)	Diegan Coastal Sage Scrub (32500)	Northern Mixed Chaparral (37130)	Mafic Northern Mixed Chaparral (37132)	Chamise Chaparral (37200)	Montane Chaparral (37500)	Non-Native Grassland (42200)	Foothill/Mountain Perennial Grassland (Code 42400)	Montane Meadow (45100)	Freshwater Marsh (52400)	Southern Riparian Forest (61300)	Southern Coast Live Oak Riparian Forest (61310)	Southern Riparian Scrub (63300)	Southern Willow Scrub (63320)	Coast Live Oak Woodland (71160)	Mixed Oak Woodland (77000)	Sierran Mixed Conifer Forest (84230)	Mixed Oak/Coniferous/Bigcone/Coulter Forest (84500)	Jeffrey Pine Forest (85100)	
250-200-01	EP																			0.2		**0.4**
250-200-07	EP																			0.2		**0.2**
250-200-08	EP																			0.2		**0.2**
250-202-01	EP																			0.3		**0.2**
250-202-03	EP																			0.2		**0.3**
250-202-06	EP																			0.3		**0.2**
250-202-09	EP																			0.2		**0.3**
250-202-10	EP																			0.2		**0.2**
250-202-12	EP																			0.6		**0.2**
250-202-15	EP																			0.4		**0.6**
250-202-16	EP																			0.2		**0.4**
250-203-01	EP																			0.2		**0.2**
250-203-02	EP																			0.3		**0.2**
250-203-07	EP																			0.3		**0.3**
250-204-02	EP																			0.3		**0.3**
250-204-03	EP																			0.2		**0.3**
250-204-05	EP																			0.2		**0.2**
250-204-10	EP																			0.2		**0.2**

APN	Survey Area[1]	Vegetation Type (Holland/Oberbauer Code)/Existing Acres																			Total
		Urban/Developed (12000)	General Agriculture (18000)	Diegan Coastal Sage Scrub (32500)	Northern Mixed Chaparral (37130)	Mafic Northern Mixed Chaparral (37132)	Chamise Chaparral (37200)	Montane Chaparral (37500)	Non-Native Grassland (42200)	Foothill/Mountain Perennial Grassland (Code 42400)	Montane Meadow (45100)	Freshwater Marsh (52400)	Southern Riparian Forest (61300)	Southern Coast Live Oak Riparian Forest (61310)	Southern Riparian Scrub (63300)	Southern Willow Scrub (63320)	Coast Live Oak Woodland (71160)	Mixed Oak Woodland (77000)	Sierran Mixed Conifer Forest (84230)	Mixed Oak/Coniferous/Bigcone/Coulter Forest (84500)	Jeffrey Pine Forest (85100)	
250-205-01	EP																			0.2		**0.2**
250-205-06	EP																			0.2		**0.2**
250-205-07	EP																			0.2		**0.2**
250-205-08	EP																			0.2		**0.2**
250-206-03	EP																			0.4		**0.2**
250-206-07	EP																			0.3		**0.4**
250-206-08	EP																			0.3		**0.3**
250-206-11	EP																			0.2		**0.3**
250-206-15	EP																			0.2		**0.2**
250-207-03	EP																			0.3		**0.2**
250-207-07	EP																			0.3		**0.3**
250-207-08	EP																			0.2		**0.3**
250-207-09	EP																			0.2		**0.2**
250-207-10	EP																			0.8		**0.2**
250-207-12	EP																			0.3		**0.8**
250-207-13	EP																			0.3		**0.3**
250-207-14	EP																			0.3		**0.3**
250-207-15	EP																			0.2		**0.3**

APN	Survey Area[1]	Vegetation Type (Holland/Oberbauer Code)/Existing Acres																			Total
		Urban/Developed (12000)	General Agriculture (18000)	Diegan Coastal Sage Scrub (32500)	Northern Mixed Chaparral (37130)	Mafic Northern Mixed Chaparral (37132)	Chamise Chaparral (37200)	Montane Chaparral (37500)	Non-Native Grassland (42200)	Foothill/Mountain Perennial Grassland (Code 42400)	Montane Meadow (45100)	Freshwater Marsh (52400)	Southern Riparian Forest (61300)	Southern Coast Live Oak Riparian Forest (61310)	Southern Riparian Scrub (63300)	Southern Willow Scrub (63320)	Coast Live Oak Woodland (71160)	Mixed Oak Woodland (77000)	Sierran Mixed Conifer Forest (84230)	Mixed Oak/Coniferous/Bigcone/Coulter Forest (84500)	Jeffrey Pine Forest (85100)	
250-207-17	EP																			0.4		**0.2**
250-207-18	EP																			0.2		**0.4**
250-208-01	EP																			0.3		**0.2**
250-208-05	EP																			0.4		**0.3**
250-208-14	EP																			1.0		**0.4**
250-208-26	EP																			0.7		**1.0**
250-209-01	EP																			0.3		**0.7**
250-209-02	EP																			0.3		**0.3**
250-209-04	EP																			0.3		**0.3**
250-211-01	EP																			0.4		**0.3**
250-211-03	EP																			0.4		**0.4**
250-211-04	EP																			0.3		**0.4**
250-211-05	EP																			0.3		**0.3**
250-211-07	EP																			0.2		**0.3**
250-211-14	EP																			0.3		**0.2**
250-211-25	EP																			0.6		**0.3**
250-211-26	EP																			0.2		**0.6**
250-211-27	EP																			0.2		**0.2**

APN	Survey Area[1]	Vegetation Type (Holland/Oberbauer Code)/Existing Acres																			Total
		Urban/Developed (12000)	General Agriculture (18000)	Diegan Coastal Sage Scrub (32500)	Northern Mixed Chaparral (37130)	Mafic Northern Mixed Chaparral (37132)	Chamise Chaparral (37200)	Montane Chaparral (37500)	Non-Native Grassland (42200)	Foothill/Mountain Perennial Grassland (Code 42400)	Montane Meadow (45100)	Freshwater Marsh (52400)	Southern Riparian Forest (61300)	Southern Coast Live Oak Riparian Forest (61310)	Southern Riparian Scrub (63300)	Southern Willow Scrub (63320)	Coast Live Oak Woodland (71160)	Mixed Oak Woodland (77000)	Sierran Mixed Conifer Forest (84230)	Mixed Oak/Coniferous/Bigcone/Coulter Forest (84500)	Jeffrey Pine Forest (85100)	
250-211-28	EP																			0.2		**0.2**
250-211-30	EP																			0.3		**0.2**
250-211-40	EP																			0.4		**0.3**
250-211-42	EP																			0.2		**0.4**
250-212-07	EP																			0.2		**0.2**
250-212-09	EP																			0.3		**0.2**
250-212-10	EP																			0.2		**0.3**
250-212-12	EP																			0.2		**0.2**
250-212-13	EP																			0.2		**0.2**
250-212-16	EP																			0.3		**0.2**
250-212-18	EP																			0.6		**0.3**
250-212-19	EP																			0.4		**0.6**
250-212-42	EP																			0.2		**0.4**
250-212-51	EP				0.1															0.3		**0.2**
250-213-03	EP				0.1															0.2		**0.4**
250-213-04	EP																			0.3		**0.3**
250-213-05	EP																			0.3		**0.3**
250-214-02	EP																			0.2		**0.3**

APN	Survey Area[1]	Vegetation Type (Holland/Oberbauer Code)/Existing Acres																			Total
		Urban/Developed (12000)	General Agriculture (18000)	Diegan Coastal Sage Scrub (32500)	Northern Mixed Chaparral (37130)	Mafic Northern Mixed Chaparral (37132)	Chamise Chaparral (37200)	Montane Chaparral (37500)	Non-Native Grassland (42200)	Foothill/Mountain Perennial Grassland (Code 42400)	Montane Meadow (45100)	Freshwater Marsh (52400)	Southern Riparian Forest (61300)	Southern Coast Live Oak Riparian Forest (61310)	Southern Riparian Scrub (63300)	Southern Willow Scrub (63320)	Coast Live Oak Woodland (71160)	Mixed Oak Woodland (77000)	Sierran Mixed Conifer Forest (84230)	Mixed Oak/Coniferous/Bigcone/Coulter Forest (84500)	Jeffrey Pine Forest (85100)	
250-214-04	EP																			0.2		**0.2**
250-214-06	EP																			0.2		**0.2**
250-214-24	EP				0.9															0.9		**0.2**
250-220-02	A									4.5							2.8					**1.7**
291-122-17	EP	0.2																		4.0		**4.2**
291-131-06	A																			1.1		**1.1**
291-150-02	EP																			0.4		**0.4**
291-150-03	EP																			0.2		**0.2**
291-150-04	EP																			0.1		**0.1**
291-150-06	EP																			0.2		**0.2**
291-150-10	EP																					
291-160-08	EP																			2.4		**2.4**
291-160-14	A				0.1															1.3		**1.4**
291-370-08	EP																			0.3		**0.3**
291-370-27	A																			0.4		**0.4**
291-380-07	EP																			0.1		**0.1**
291-420-01	EP																			0.6		**0.6**
SR 78-79 Corridor																						

APN	Survey Area[1]	Vegetation Type (Holland/Oberbauer Code)/Existing Acres																			Total
		Urban/Developed (12000)	General Agriculture (18000)	Diegan Coastal Sage Scrub (32500)	Northern Mixed Chaparral (37130)	Mafic Northern Mixed Chaparral (37132)	Chamise Chaparral (37200)	Montane Chaparral (37500)	Non-Native Grassland (42200)	Foothill/Mountain Perennial Grassland (Code 42400)	Montane Meadow (45100)	Freshwater Marsh (52400)	Southern Riparian Forest (61300)	Southern Coast Live Oak Riparian Forest (61310)	Southern Riparian Scrub (63300)	Southern Willow Scrub (63320)	Coast Live Oak Woodland (71160)	Mixed Oak Woodland (77000)	Sierran Mixed Conifer Forest (84230)	Mixed Oak/Coniferous/Bigcone/Coulter Forest (84500)	Jeffrey Pine Forest (85100)	
248-050-03	EP																10.7	0.4				**11.0**
248-050-06	A				13.0												0.1	4.2				**14.2**
248-050-15	EP				0.4												0.1	0.1				**3.6**
248-050-21	EP																	1.7				**1.7**
248-050-22	EP																1.1	5.1				**6.2**
248-050-23	EP																0.6	0.2				**0.7**
248-050-25	EP																1.1					**1.1**
248-060-01	EP		0.5														2.1					**2.6**
248-060-03	EP		1.6														0.6					**2.2**
248-060-10	EP																1.9					**1.9**
248-060-11	EP										0.3						2.0					**2.4**
248-060-14	EP										0.1						0.8					**0.8**
248-060-15	EP										1.5						3.7					**5.2**
248-060-23	EP																3.1					**3.1**
248-060-26	EP		2.7														10.5					**13.2**
248-060-33	A										5.0						2.1					**7.0**
248-060-34	A										4.2						8.6					**12.7**

APN	Survey Area[1]	Vegetation Type (Holland/Oberbauer Code)/Existing Acres																			Total
		Urban/Developed (12000)	General Agriculture (18000)	Diegan Coastal Sage Scrub (32500)	Northern Mixed Chaparral (37130)	Mafic Northern Mixed Chaparral (37132)	Chamise Chaparral (37200)	Montane Chaparral (37500)	Non-Native Grassland (42200)	Foothill/Mountain Perennial Grassland (Code 42400)	Montane Meadow (45100)	Freshwater Marsh (52400)	Southern Riparian Forest (61300)	Southern Coast Live Oak Riparian Forest (61310)	Southern Riparian Scrub (63300)	Southern Willow Scrub (63320)	Coast Live Oak Woodland (71160)	Mixed Oak Woodland (77000)	Sierran Mixed Conifer Forest (84230)	Mixed Oak/Coniferous/Bigcone/Coulter Forest (84500)	Jeffrey Pine Forest (85100)	
248-160-02	EP																2.2					**2.2**
248-160-06	A/B																1.0					**1.0**
248-160-20	EP																	1.3				**1.4**
248-160-28	A																1.3					**1.3**
248-180-22	EP																2.0					**2.0**
248-180-27	A																	13.1				**13.1**
248-190-15	EP																5.3					**5.3**
248-190-23	EP							1.2									6.8					**7.9**
248-210-02	EP																2.7					**2.7**
248-210-03	EP																2.7					**2.7**
248-230-08	EP																0.7	1.9				**2.6**
248-230-09	EP																2.3	0.2				**2.5**
248-230-11	EP																1.3	1.3				**2.6**
248-230-13	EP																	2.6				**2.6**
248-230-15	EP																	2.5				**2.5**
248-230-17	EP																0.1	2.5				**2.6**
248-230-20	EP																	2.6				**2.6**

APN	Survey Area[1]	Vegetation Type (Holland/Oberbauer Code)/Existing Acres																			Total
		Urban/Developed (12000)	General Agriculture (18000)	Diegan Coastal Sage Scrub (32500)	Northern Mixed Chaparral (37130)	Mafic Northern Mixed Chaparral (37132)	Chamise Chaparral (37200)	Montane Chaparral (37500)	Non-Native Grassland (42200)	Foothill/Mountain Perennial Grassland (Code 42400)	Montane Meadow (45100)	Freshwater Marsh (52400)	Southern Riparian Forest (61300)	Southern Coast Live Oak Riparian Forest (61310)	Southern Riparian Scrub (63300)	Southern Willow Scrub (63320)	Coast Live Oak Woodland (71160)	Mixed Oak Woodland (77000)	Sierran Mixed Conifer Forest (84230)	Mixed Oak/Coniferous/Bigcone/Coulter Forest (84500)	Jeffrey Pine Forest (85100)	
248-230-22	EP																	2.5				**2.5**
248-241-01	EP																2.4	0.2				**2.6**
248-241-02	EP																2.4					**2.4**
248-241-03	EP																4.6					**4.6**
248-241-05	A																0.4					**0.4**
248-242-05	EP																0.2	3.3				**3.5**
250-070-09	EP																			0.5		**0.5**
289-060-01	EP																7.3					**7.3**
291-010-12	EP																			0.2		**0.2**
291-010-16	EP													0.2						0.8		**1.0**
291-010-17	EP													0.3						0.9		**1.2**
291-010-18	EP													0.7						0.4		**1.1**
291-010-19	EP													0.9						0.2		**1.1**
291-010-20	EP													0.1						1.2		**1.3**
291-010-21	EP													1.4						0.6		**2.0**
291-010-26	EP																			1.4		**1.4**
291-022-01	EP																			0.8		**0.8**

APN	Survey Area[1]	Vegetation Type (Holland/Oberbauer Code)/Existing Acres																			Total
		Urban/Developed (12000)	General Agriculture (18000)	Diegan Coastal Sage Scrub (32500)	Northern Mixed Chaparral (37130)	Mafic Northern Mixed Chaparral (37132)	Chamise Chaparral (37200)	Montane Chaparral (37500)	Non-Native Grassland (42200)	Foothill/Mountain Perennial Grassland (Code 42400)	Montane Meadow (45100)	Freshwater Marsh (52400)	Southern Riparian Forest (61300)	Southern Coast Live Oak Riparian Forest (61310)	Southern Riparian Scrub (63300)	Southern Willow Scrub (63320)	Coast Live Oak Woodland (71160)	Mixed Oak Woodland (77000)	Sierran Mixed Conifer Forest (84230)	Mixed Oak/Coniferous/Bigcone/Coulter Forest (84500)	Jeffrey Pine Forest (85100)	
291-022-02	EP																			0.8		**0.8**
291-022-05	EP																			0.5		**0.5**
291-022-06	EP																			0.1		**0.1**
291-023-02	EP																			0.2		**0.2**
291-023-09	EP																			0.3		**0.3**
291-023-10	EP																			0.5		**0.5**
291-023-24	EP																			0.1		**0.1**
291-023-26	EP																			0.2		**0.2**
291-023-28	A																			0.2		**0.2**
291-023-29	EP																			0.2		**0.2**
291-023-30	EP																			0.2		**0.2**
291-023-31	EP																			0.3		**0.3**
291-023-32	EP																			0.4		**0.4**
291-032-01	EP																			1.9		**1.9**
291-032-02	EP																			0.1		**0.1**
291-032-03	EP																			11.1		**11.1**
291-032-04	A/B																			4.4		**4.4**

APN	Survey Area[1]	Vegetation Type (Holland/Oberbauer Code)/Existing Acres																		Total
		Urban/Developed (12000)	General Agriculture (18000)	Diegan Coastal Sage Scrub (32500)	Northern Mixed Chaparral (37130)	Mafic Northern Mixed Chaparral (37132)	Chamise Chaparral (37200)	Montane Chaparral (37500)	Non-Native Grassland (42200)	Foothill/Mountain Perennial Grassland (Code 42400)	Montane Meadow (45100)	Freshwater Marsh (52400)	Southern Riparian Forest (61300)	Southern Coast Live Oak Riparian Forest (61310)	Southern Riparian Scrub (63300)	Southern Willow Scrub (63320)	Coast Live Oak Woodland (71160)	Mixed Oak Woodland (77000)	Sierran Mixed Conifer Forest (84230)	Mixed Oak/Coniferous/Bigcone/Coulter Forest (84500)	Jeffrey Pine Forest (85100)	
291-032-05	A/B			0.3																9.4		**9.7**
291-040-01	EP																			16.5		**16.5**
291-040-07	EP																			1.3		**1.3**
291-040-09	EP																			0.6		**0.6**
291-040-10	EP																			0.4		**0.4**
291-040-27	EP																			0.5		**0.5**
291-040-32	EP																			0.5		**0.5**
291-040-33	EP																			0.6		**0.6**
291-040-34	EP																			0.7		**0.7**
291-040-51	EP																			3.8		**3.8**
291-072-09	EP	0.4																				**0.4**
291-121-12	EP																			0.4		**0.4**
291-122-11	A																			1.8		**1.8**
291-170-18	EP																			3.6		**3.6**
291-170-30	A																			6.3		**6.3**
291-170-31	EP																			1.0		**1.0**
291-171-09	EP																			2.7		

APN	Survey Area[1]	Vegetation Type (Holland/Oberbauer Code)/Existing Acres																			Total
		Urban/Developed (12000)	General Agriculture (18000)	Diegan Coastal Sage Scrub (32500)	Northern Mixed Chaparral (37130)	Mafic Northern Mixed Chaparral (37132)	Chamise Chaparral (37200)	Montane Chaparral (37500)	Non-Native Grassland (42200)	Foothill/Mountain Perennial Grassland (Code 42400)	Montane Meadow (45100)	Freshwater Marsh (52400)	Southern Riparian Forest (61300)	Southern Coast Live Oak Riparian Forest (61310)	Southern Riparian Scrub (63300)	Southern Willow Scrub (63320)	Coast Live Oak Woodland (71160)	Mixed Oak Woodland (77000)	Sierran Mixed Conifer Forest (84230)	Mixed Oak/Coniferous/Bigcone/Coulter Forest (84500)	Jeffrey Pine Forest (85100)	
291-171-10	EP																			1.0		**1.0**
291-171-12	EP																			4.8		**4.8**
292-011-29	EP																			4.5		**4.5**
292-011-30	EP		4.1																			**4.1**
292-011-33	EP				0.6															7.6		**8.2**
292-011-34	EP																			1.8		**4.4**
292-041-27	A							1.7												29.6		**31.3**
292-041-28	A					1.7														29.4		**31.1**
292-042-04	EP																			1.9		**1.9**
292-042-07	EP																			0.7		**0.7**
292-042-08	EP																			0.7		**0.7**
292-042-09	EP																			3.3		**3.3**
292-042-15	EP				0.5			0.3												7.5		**8.2**
292-042-17	EP							2.7												5.4		**8.1**
292-042-18	EP							1.5												7.4		**9.0**
292-042-19	EP																			4.2		**4.2**
292-042-20	EP																			1.6		**1.6**

APN	Survey Area[1]	Vegetation Type (Holland/Oberbauer Code)/Existing Acres																			Total
		Urban/Developed (12000)	General Agriculture (18000)	Diegan Coastal Sage Scrub (32500)	Northern Mixed Chaparral (37130)	Mafic Northern Mixed Chaparral (37132)	Chamise Chaparral (37200)	Montane Chaparral (37500)	Non-Native Grassland (42200)	Foothill/Mountain Perennial Grassland (Code 42400)	Montane Meadow (45100)	Freshwater Marsh (52400)	Southern Riparian Forest (61300)	Southern Coast Live Oak Riparian Forest (61310)	Southern Riparian Scrub (63300)	Southern Willow Scrub (63320)	Coast Live Oak Woodland (71160)	Mixed Oak Woodland (77000)	Sierran Mixed Conifer Forest (84230)	Mixed Oak/Coniferous/Bigcone/Coulter Forest (84500)	Jeffrey Pine Forest (85100)	
292-051-19	EP																			0.2		**0.2**
292-051-27	EP																			0.4		**0.4**
292-051-34	EP																			0.2		**0.2**
292-051-35	EP																			0.2		**0.2**
292-054-41	EP																			0.2		**0.2**
292-054-44	EP																			0.1		**0.1**
292-054-45	EP																			0.1		**0.1**
292-054-48	EP																			0.1		**0.1**
292-054-49	EP																			0.4		**0.4**
292-055-01	EP																			0.6		**0.6**
292-055-28	EP																			0.2		**0.2**
292-055-29	EP																			0.3		**0.3**
292-056-04	EP																			0.5		**0.5**
292-056-09	EP																			0.3		**0.3**
292-057-05	EP																			0.4		**0.4**
292-058-03	EP				0.3																	**0.3**
292-058-04	EP				0.3																	**0.3**

APN	Survey Area[1]	Vegetation Type (Holland/Oberbauer Code)/Existing Acres																		Total
		Urban/Developed (12000)	General Agriculture (18000)	Diegan Coastal Sage Scrub (32500)	Northern Mixed Chaparral (37130)	Mafic Northern Mixed Chaparral (37132)	Chamise Chaparral (37200)	Montane Chaparral (37500)	Non-Native Grassland (42200)	Foothill/Mountain Perennial Grassland (Code 42400)	Montane Meadow (45100)	Freshwater Marsh (52400)	Southern Riparian Forest (61300)	Southern Coast Live Oak Riparian Forest (61310)	Southern Riparian Scrub (63300)	Southern Willow Scrub (63320)	Coast Live Oak Woodland (71160)	Mixed Oak Woodland (77000)	Sierran Mixed Conifer Forest (84230)	Mixed Oak/Coniferous/Bigcone/Coulter Forest (84500)	Jeffrey Pine Forest (85100)	
292-079-11	EP				0.2																	**0.2**
292-079-12	EP				0.3																	**0.3**
292-079-13	EP																			0.2		**0.2**
292-079-14	EP																			0.2		**0.2**
292-140-09	EP					1.0														0.2		**1.2**
292-140-10	EP					13.3																**13.3**
292-140-29	A					15.7													21.0	29.4		**66.1**
292-140-30	EP																			1.0		**1.0**
292-140-39	A																			3.0		**3.0**
292-140-40	A																			6.6		**6.6**
292-140-41	EP																			3.0		**3.0**
292-141-03	EP																		2.0			**2.0**
292-141-06	A/B																		23.1			**23.1**
292-141-10	EP																		5.5			**5.5**
292-141-36	A																		2.4			**2.4**
292-141-37	EP																		4.3			**4.3**
292-150-29	EP					3.8																**3.8**

APN	Survey Area[1]	Vegetation Type (Holland/Oberbauer Code)/Existing Acres																			Total
		Urban/Developed (12000)	General Agriculture (18000)	Diegan Coastal Sage Scrub (32500)	Northern Mixed Chaparral (37130)	Mafic Northern Mixed Chaparral (37132)	Chamise Chaparral (37200)	Montane Chaparral (37500)	Non-Native Grassland (42200)	Foothill/Mountain Perennial Grassland (Code 42400)	Montane Meadow (45100)	Freshwater Marsh (52400)	Southern Riparian Forest (61300)	Southern Coast Live Oak Riparian Forest (61310)	Southern Riparian Scrub (63300)	Southern Willow Scrub (63320)	Coast Live Oak Woodland (71160)	Mixed Oak Woodland (77000)	Sierran Mixed Conifer Forest (84230)	Mixed Oak/Coniferous/Bigcone/Coulter Forest (84500)	Jeffrey Pine Forest (85100)	
292-151-27	A						2.5												0.1			**2.6**
294-011-52	A				0.4														3.7			**4.1**
294-011-55	EP				0.9														9.4			**10.3**
294-011-60	EP				0.6														4.0			**4.6**
294-011-75	EP				14.0					1.8									6.7			**22.5**
294-012-02	A/B				2.9					0.1									21.3			**24.3**
294-012-03	EP																		0.6			**0.6**
294-012-09	EP																		3.1			**3.1**
294-012-13	A				5.0		1.5												5.4			**11.9**
294-012-18	A				5.0																	**5.0**
294-012-19	A				5.5														0.4			**6.0**
294-012-20	EP				4.2														0.6			**4.9**
294-012-21	EP				3.2														1.0			**4.3**
294-012-22	EP				5.4																	**5.4**
294-012-25	EP																		4.9			**4.9**
294-012-28	EP																		14.1			**14.1**
294-012-29	EP																		8.7			**8.7**

APN	Survey Area[1]	Vegetation Type (Holland/Oberbauer Code)/Existing Acres																			Total
		Urban/Developed (12000)	General Agriculture (18000)	Diegan Coastal Sage Scrub (32500)	Northern Mixed Chaparral (37130)	Mafic Northern Mixed Chaparral (37132)	Chamise Chaparral (37200)	Montane Chaparral (37500)	Non-Native Grassland (42200)	Foothill/Mountain Perennial Grassland (Code 42400)	Montane Meadow (45100)	Freshwater Marsh (52400)	Southern Riparian Forest (61300)	Southern Coast Live Oak Riparian Forest (61310)	Southern Riparian Scrub (63300)	Southern Willow Scrub (63320)	Coast Live Oak Woodland (71160)	Mixed Oak Woodland (77000)	Sierran Mixed Conifer Forest (84230)	Mixed Oak/Coniferous/Bigcone/Coulter Forest (84500)	Jeffrey Pine Forest (85100)	
294-012-32	A				0.5														7.2			**7.7**
294-030-03	A																		18.4			**18.3**
294-070-27	A							1.2														**1.2**
294-070-47	A							0.3														**0.4**
294-094-18	EP									0.1									0.3			**0.4**
294-096-01	EP																		0.3			**0.3**
294-180-01	A																		3.0			**3.0**
294-180-03	EP										0.1								4.3			**4.4**
294-180-18	A	0.1																				**0.1**
335-010-21	EP																				0.6	**0.6**
335-010-25	A									0.4												**0.5**
335-010-29	A																				1.0	**1.0**
335-020-05	EP																		0.2		0.8	**1.0**
335-020-06	EP																		0.3		0.8	**1.1**
335-030-09	A/B/C/E								0.3							0.6					0.6	**1.5**
335-030-11	A/B							0.4	0.8													**1.2**
407-050-08	A				4.1												1.1				3.0	**10.5**

APN	Survey Area[1]	Vegetation Type (Holland/Oberbauer Code)/Existing Acres																			Total
		Urban/Developed (12000)	General Agriculture (18000)	Diegan Coastal Sage Scrub (32500)	Northern Mixed Chaparral (37130)	Mafic Northern Mixed Chaparral (37132)	Chamise Chaparral (37200)	Montane Chaparral (37500)	Non-Native Grassland (42200)	Foothill/Mountain Perennial Grassland (Code 42400)	Montane Meadow (45100)	Freshwater Marsh (52400)	Southern Riparian Forest (61300)	Southern Coast Live Oak Riparian Forest (61310)	Southern Riparian Scrub (63300)	Southern Willow Scrub (63320)	Coast Live Oak Woodland (71160)	Mixed Oak Woodland (77000)	Sierran Mixed Conifer Forest (84230)	Mixed Oak/Coniferous/Bigcone/Coulter Forest (84500)	Jeffrey Pine Forest (85100)	
407-050-13	A													1.7			33.8				1.9	**37.4**
407-050-18	EP																2.1					**2.1**
407-051-03	EP				16.8									0.9								**17.6**
407-100-36	EP																6.9					**6.9**
407-100-45	A																5.4					**5.4**
407-100-49	A				4.8												2.2					**6.9**
407-100-50	EP				1.1							1.3		8.6			5.2					**16.1**
407-111-11	A																0.2					**0.2**
407-111-13	EP																0.4					**0.4**
407-112-02	EP																0.5					**0.5**
407-112-06	EP																0.5					**0.5**
407-112-07	EP																0.4					**0.4**
407-112-10	EP				0.1												0.1					**0.2**
407-112-11	EP				0.3												0.2					**0.4**
407-112-13	EP				0.2																	**0.2**
407-112-14	EP				0.5																	**0.5**
407-112-15	EP				0.3																	**0.3**

APN	Survey Area[1]	Vegetation Type (Holland/Oberbauer Code)/Existing Acres																			Total
		Urban/Developed (12000)	General Agriculture (18000)	Diegan Coastal Sage Scrub (32500)	Northern Mixed Chaparral (37130)	Mafic Northern Mixed Chaparral (37132)	Chamise Chaparral (37200)	Montane Chaparral (37500)	Non-Native Grassland (42200)	Foothill/Mountain Perennial Grassland (Code 42400)	Montane Meadow (45100)	Freshwater Marsh (52400)	Southern Riparian Forest (61300)	Southern Coast Live Oak Riparian Forest (61310)	Southern Riparian Scrub (63300)	Southern Willow Scrub (63320)	Coast Live Oak Woodland (71160)	Mixed Oak Woodland (77000)	Sierran Mixed Conifer Forest (84230)	Mixed Oak/Coniferous/Bigcone/Coulter Forest (84500)	Jeffrey Pine Forest (85100)	
407-112-16	EP																1.1					**1.1**
407-121-06	EP																0.9					**0.9**
407-121-17	EP																0.2					**0.2**
407-121-21	EP																0.5					**0.5**
407-122-16	EP																0.4					**0.4**
407-122-17	EP																0.5					**0.5**
407-130-09	EP				0.1												0.3					**0.4**
407-130-18	EP																0.1					**0.1**
407-130-20	EP																0.1					**0.1**
407-130-23	EP				1.9												0.6					**3.3**
408-080-06	EP				0.6																	**0.6**
408-080-07	EP				1.1												0.2					**1.2**
408-080-08	A				3.0												1.3					**4.3**
408-080-09	A				0.3					0.9							4.4					**5.5**
408-080-47	EP				1.6																	**1.6**
408-080-49	EP				1.2																	**1.2**
408-080-65	A									3.6		1.3					13.6					**18.6**

APN	Survey Area[1]	Vegetation Type (Holland/Oberbauer Code)/Existing Acres																			Total
		Urban/Developed (12000)	General Agriculture (18000)	Diegan Coastal Sage Scrub (32500)	Northern Mixed Chaparral (37130)	Mafic Northern Mixed Chaparral (37132)	Chamise Chaparral (37200)	Montane Chaparral (37500)	Non-Native Grassland (42200)	Foothill/Mountain Perennial Grassland (Code 42400)	Montane Meadow (45100)	Freshwater Marsh (52400)	Southern Riparian Forest (61300)	Southern Coast Live Oak Riparian Forest (61310)	Southern Riparian Scrub (63300)	Southern Willow Scrub (63320)	Coast Live Oak Woodland (71160)	Mixed Oak Woodland (77000)	Sierran Mixed Conifer Forest (84230)	Mixed Oak/Coniferous/Bigcone/Coulter Forest (84500)	Jeffrey Pine Forest (85100)	
408-081-11	EP	1.7	11.8												2.0							**15.5**
408-081-12	A		0.2														2.0					**2.6**
408-090-05	EP																0.2					**0.2**
408-090-06	EP																0.7					**0.7**
408-090-07	EP																1.0					**1.0**
408-090-08	EP																0.3					**0.3**
Total:		**2.3**	**26.1**	**1.3**	**128.5**	**35.6**	**4.6**	**12.2**	**4.2**	**11.3**	**13.7**	**2.6**	**11.2**	**26.9**	**2.0**	**0.6**	**178.1**	**45.7**	**176.4**	**526.0**	**8.5**	**1215.5**

[1] EP = Entire Parcel; A or B = Operation Unit letter code

APPENDIX 3. FLORA SPECIES OBSERVED

Habitat Types:

A = urban developed
B = general agriculture
C = Diegan coastal sage scrub
D = northern mixed chaparral
E = mafic northern mixed chaparral
F = chamise chaparral
G = montane chaparral
H = non-native grassland
I = foothill/mountain perennial grassland
J = montane meadow
K = freshwater marsh
L = southern riparian forest
M = southern coast live oak riparian forest
N = southern riparian scrub
O = southern willow scrub
P = coast live oak woodland
Q = mixed oak woodland
R = Sierran mixed coniferous forest
S = mixed oak/coniferous/bigcone/Coulter forest
T = Jeffery pine forest

* = Denotes non-native flora species.

Scientific Name	Common Name	Habitat
GYMNOSPERMS		
Cupressaceae - Cypress Family		
Calocedrus decurrens (Torrey) Florin	california incense cedar	R, S, T
Pinaceae - Pine Family		
Abies concolor (Gordon & Glend.) Lindley	white fir	R, S, T
Pinus coulteri D. Don	Coulter pine	P, R, S, T
Pinus jeffreyi Grev. & Balf.	Jeffrey pine, yellow pine	R, S, T
Pseudotsuga macrocarpa (Vasey) Mayr	big-cone Douglas fir	R, S, T
DICOTYLEDONS		
Adoxaceae – Adoxa Family		
Sambucus mexicana C. Presl	blue elderberry	C, D, L, M,N, O
Amaranthaceae - Amaranth Family		
* *Atriplex semibaccata* R. Br.	Australian saltbush	A, B, H, F
* *Chenopodium album* L.	lamb's quarters	A, C, D, F, H, N, O, P
Anacardiaceae - Sumac Family		
Malosma laurina (Nutt.) Abrams	laurel sumac	C, D, E
Rhus integrifolia (Nutt.) Brewer & S. Watson	lemonadeberry	C
Rhus ovata S. Watson	sugar bush	C, D
Rhus trilobata Torrey & A. Gray	skunkbrush	C, D, F, G
* *Schinus molle* L.	Peruvian pepper tree	A, B, C, H
Toxicodendron diversilobum (Torrey & A. Gray) E. Greene	western poison oak	A, B, C, D, E, F, G, H, L, M, N, P, Q, S
Apiaceae - Carrot Family		
* *Conium maculatum* L.	common poison hemlock	A, K, L, N,O, S
Daucus pusillus Michaux	rattlesnake weed	C, D, E, F, G, H
Sanicula bipinnatifida Hook.	purple sanicle	D, F, H, M, P,Q

Scientific Name	Common Name	Habitat
Apocynaceae - Dogbane Family		
Asclepias fascicularis Decne.	narrow-leaf milkweed	A, B, H, I, J, P, Q
* *Catharanthus roseus* (L.) G. Don	Madagascar periwinkle	A, P, Q
Asteraceae - Sunflower Family		
Achillea millefolium L.	yarrow, milfoil	H, I, J, P, Q, S
* *Amblyopappus pusillus* Hook. & Arn.	pineapple weed	A, C, D, F, H
Ambrosia psilostachya DC.	western ragweed	A, B, H, K, L, N, O
Artemisia californica Less.	California sagebrush	C, D, F
Artemisia douglasiana Besser	mugwort	K, L, M, N, O
Artemisia dracunculus L.	tarragon	A, L,M, N, O
Baccharis pilularis DC.	coyote brush, chaparral broom	A, C, D, F, N
* *Centaurea melitensis* L.	tocalote	A, B, C, F, H, I, P, Q, S
Cirsium scariosum Nutt.	Bird's nest thistle, elk thistle	H, M, P, S
Conyza canadensis (L.) Cronq.	horseweed	A, B, C, H, Q, S
Eriophyllum confertiflorum (DC.) A. Gray var. *confertiflorum*	long-stem golden-yarrow	C, D, M, F, H
Gnaphalium californicum DC.	California everlasting	A, B, D, F, H, I
Hazardia squarrosa (Hook. & Arn.) E. Greene var. *squarrosa*	southern sawtooth goldenbush	A, C, F
Helianthus gracilentus A. Gray	slender sunflower	D, E, F, H, I
* *Hypochaeris radicata* L.	hairy cat's ear	A, B, C, H, Q, S
* *Silybum marianum* (L.) Gaertner	milk-thistle	A, B, C, H
Solidago californica Nutt.	California goldenrod	B, H, I, J, L
* *Taraxacum officinale* Wigg.	common dandelion	A, B, H
Wyethia ovata Torrey & Gray	southern mule's ear	A, H, I, J
Berberidaceae - Barberry Family		
Berberis aquifolium Pursh var. *repens* (Lindley) H. Scoggan	dull-leaf barberry	Q, R, S
Boraginaceae - Borage Family		
Amsinckia menziesii (Lehm.) Nelson & J. F. Macbr. var. *menziesii*	rigid fiddleneck	A, B, C, H, I, J
Cryptantha micromeres (A. Gray) E. Greene	minute-flower cryptantha	B, C, F, H, I

Scientific Name	Common Name	Habitat
Brassicaceae - Mustard Family		
* *Brassica nigra* (L.) Koch	black mustard	A, B, C, D, F, H, L, O, P, Q, S
* *Capsella bursa-pastoris* (L.) Medikus	shepherd's-purse	A, B, C, H, I, Q
Erysimum capitatum (Douglas) E. Greene ssp. *capitatum*	western wallflower	F, G Q, R, S, T
* *Hirschfeldia incana* (L.)Lagr.-Fossat	short-pod mustard	A, B, C, D, F, H, L, O, P, Q
* *Lepidium latifolium* L.	broad-leaf peppergrass	A, B, C, F, H, K, M, P, Q
* *Raphanus sativus* L.	wild radish	A, B, K, P
* *Sisymbrium irio* L.	London rocket	A, B, K
Cactaceae - Cactus Family		
* *Opuntia ficus-indica* (L.) Miller	mission prickly pear, Indian-fig	A, C, H
Caprifoliaceae - Honeysuckle Family		
Lonicera subspicata Hook. & Arn. var. *subspicata*	southern honeysuckle	C, D, F, G, P, Q, R, S
Symphoricarpos mollis Nutt.	creeping snowberry, trip vine	Q, R, S
Caryophyllaceae - Pink Family		
* *Stellaria media* (L.) Villars	common chickweed	A, J, K, N, O
Convolvulaceae - Morning-Glory Family		
* *Convolvulus arvensis* L.	field bindweed	A, B, C, F, H, I
Cuscuta californica Hook & Arn. var. *californica*	chaparral dodder, witch's hair	C, D, F
Crassulaceae - Stonecrop Family		
Dudleya lanceolata (Nutt.) Britton & Rose	coastal/lance-leaf dudleya	A, C, Q
Cucurbitaceae - Gourd Family		
Cucurbita palmata S. Watson	coyote melon	A, B, H
Marah macrocarpus (E. Greene) E. Greene var. *macrocarpus*	manroot, wild-cucumber	A, C, D, F, G, L, N, O, P, Q
Datiscaceae - Datisca Family		
Datisca glomerata (C. Presl.) Baillon	durango root	Q

Scientific Name	Common Name	Habitat
Ericaceae - Heath Family		
Arctostaphylos glauca Lindley	big-berry manzanita	D, F, G
Arctostaphylos pungens Kunth	point-leaf/Mexico manzanita	C, D, F, E, G, Q, S
Euphorbiaceae - Spurge Family		
Chamaesyce albomarginata (Torrey & Gray) Small	rattlesnake spurge	A B, C
* *Ricinus communis* L.	castor-bean	B, C, F
Fabaceae - Pea Family		
Lathyrus vestitus Nutt. var. *vestitus*	canyon sweet pea	C, D, E, F, G, A
Lotus scoparius (Nutt.) Ottley var. *scoparius*	coastal deerweed	C, D, F
Lupinus bicolor Lindley	miniature lupine	A, C, H, I, Q, S
* *Melilotus officinalis* (L.) Pall.	yellow sweetclover	A, B, C, H
* *Robinia pseudoacacia* L.	black locust	A, Q, S
Trifolium albopurpureum Torrey & A. Gray var. *albopurpureum*	rancheria clover	A, C, H
Trifolium depauperatum Desv. var. *truncatum* (E. Greene) Isley	pale bladder clover	A, H
* *Vicia villosa* Roth ssp. *villosa*	winter vetch	A, B, H
Fagaceae - Oak Family		
Quercus agrifolia Neé var. *agrifolia*	coast live oak, encina	M, P, Q, S
Quercus berberidifolia Liebm.	scrub oak	D, F, G, Q, S
Quercus chrysolepis Liebm.	canyon live oak	Q, R, S
Quercus kelloggii Newb.	California black oak	Q, R, S, T
Quercus wislizenii A. DC. var. *frutescens* Engelm.	interior live oak, scrub live oak	P, Q, R, S
Geraniaceae - Geranium Family		
* *Erodium cicutarium* (L.) L'Hér.	red-stem filaree	A, B, C, D, F, H, P, Q, R, S
Geranium californicum G. Jones & F. Jones	California geranium	A, B, H
Hydrophyllaceae - Waterleaf Family		
Eriodictyon crassifolium Benth. var. *crassifolium*	felt/thick-leaved yerba santa	C D, F
Phacelia cicutaria E. Greene var. *hispida* (A. Gray) J. Howell	caterpillar phacelia	C, F, Q

Scientific Name	Common Name	Habitat
Lamiaceae - Mint Family		
Lamium amplexicaule L.	henbit	A, B, C, H, Q
* *Mentha* x *piperita* L.	peppermint	L, O
Salvia apiana Jepson	white sage	C, D, F
Trichostema lanceolatum Benth.	vinegar weed	B, H
Trichostema parishii Vasey	mountain blue-curls	J
Malvaceae - Mallow Family		
* *Malva parviflora* L.	cheeseweed, little mallow	A, B, H
Sidalcea malviflora (DC.) Benth. ssp. *sparsifolia* C. Hitchc.	checker-bloom	A, B, H
Moraceae - Mulberry Family		
* *Ficus carica* L.	edible fig	A, G
Oleaceae - Olive Family		
* *Syringia sp*	lilac	A, B
Onagraceae - Evening-Primrose Family		
Camissonia bistorta (Torrey & A. Gray) Raven	California sun cup	A, B, C, D
Clarkia purpurea ssp. *quadrivulnera*	purple clarkia	C, D, H, R, S
Epilobium canum ssp. *latifolium*	broad-leaved California	C, D, N, O, Q, S
Orobanchaceae - Broom-Rape Family		
Castilleja exserta (A. A. Heller) Chuang & Heckard ssp. *exserta*	purple owl's-clover	A, B, H, I, J
Cordylanthus rigidus ssp. *setigerus*	dark-tip bird's-beak	A, B, C, D, H, I
Paeoniaceae - Peony Family		
Paeonia californica Torrey & A. Gray	California peony	D, E, F, P, Q
Papaveraceae - Poppy Family		
Eschscholzia californica Cham.	California poppy	B, C, D, H, I, J

Scientific Name	Common Name	Habitat
Phrymaceae – Hopseed Family		
Mimulus brevipes Benth.	slope monkey flower	C, D, F, G
Plantaginaceae - Plantain Family		
Collinsia heterophylla Buist	purple Chinese houses	D, E, F, G, H, S
Keckiella ternata (Torrey) Straw var. *ternata*	summer bush penstemon	F, G, P, Q
Penstemon spectabilis Thurber. var. *spectabilis*	showy penstemon	C, D, F
* *Plantago lanceolata* L.	English plantain, rib-grass	A, B, C, H
Plumbaginaceae - Leadwort Family		
* *Limonium* sp.		A, B, C, H
Polemoniaceae - Phlox Family		
Collomia grandiflora Lindley	grand collomia	Q
Leptosiphon ciliatus (Benth.) Jepson	whisker brush	R, S, T
Phlox austromontana Cov.	desert mountain phlox	G
Polygonaceae - Buckwheat Family		
Eriogonum elongatum Benth. var. *elongatum*	tall buckwheat	C, D, F
Eriogonum fasciculatum Benth. var. *fasciculatum*	coast California buckwheat	C, D, F, H
* *Rumex crispus* L.	curly dock	A, B, H, K, N
Portulacaceae - Purslane Family		
Claytonia exigua Torrey & A. Gray ssp. *exigua*	serpentine montia	L, M, N, P, Q, S
Primulaceae - Primrose Family		
* *Anagallis arvensis* L.	scarlet pimpernel	A, B, C, Q, S
Ranunculaceae - Buttercup Family		
Ranunculus californicus Benth.	California buttercup	J
Rhamnaceae - Buckthorn Family		
Ceanothus greggii A. Gray var. *perplexans* (Trel.) Jepson	cup-leaf ceanothus/lilac	D, F, G

Scientific Name	Common Name	Habitat
Ceanothus leucodermis E. Greene	chaparral whitethorn	D, F, G
Ceanothus oliganthus Nutt. var. *oliganthus*	hairy-leaf ceanothus	D, F, G, Q
Ceanothus palmeri Trel.	Palmer's lilac/ceanothus	Q, R, S, T
Rhamnus californica Eschsch. ssp. *californica*	California coffeeberry	Q , R, S
Rhamnus tomentella Benth. ssp. *tomentella*	chaparral/hoary coffeeberry	D, G, Q, S
Rosaceae - Rose Family		
Adenostoma fasciculatum Hook. & Arn.	chamise	D, E, F
Cercocarpus betuloides Torrey & A. Gray var. *betuloides*	birch-leaf/interior, mountain-mahogany	D, E, F, G, S
Heteromeles arbutifolia (Lindley) M. Roemer	toyon, Christmas berry	C, D, E, F, G
Malus sylvestris P. Mill.	apple	A, B, H
Potentilla glandulosa Lindley ssp. *glandulosa*	sticky cinquefoil	J, L, M, S
Prunus ilicifolia (Nutt.) Walp. ssp. *ilicifolia*	holly-leafed cherry	D, F, G, Q, S
Prunus virginiana L. var. *demissa* (Nutt.) Torrey	western choke-cherry	P, Q, S
Rosa californica Cham. & Schldl.	California rose	M, N, O, Q, S
* *Rubus armeniacus* Focke	Himalayan blackberry	L, M, N, O, S
Rubiaceae - Madder Family		
Galium angustifolium Nutt. ssp. *angustifolium*	narrow-leaf bedstraw	C, D, E, F, G, Q, S
Galium aparine L.	goose grass, common bedstraw	M, P, Q, R, S
Rutaceae - Rue Family		
Citrus sp.	orange tree	A, B
Salicaceae - Willow Family		
Populus fremontii S. Watson ssp. *fremontii*	western/Fremont cottonwood	L, M
Salix gooddingii C. Ball	Goodding's black willow	L, O
Salix lasiolepis Benth.	arroyo willow	L, O
Simaroubaceae - Quassia Family		
* *Ailanthus altissima* (Miller) Swingle	tree of heaven	A, B, Q, S

Scientific Name	Common Name	Habitat
Solanaceae - Nightshade Family		
Datura discolor Bernh.	Desert thornapple, jimsonweed	A, B, H,
* *Nicotiana glauca* Graham	tree tobacco	A, C, D, H
Solanum parishii A.A. Heller	Parish's nightshade	C, D, F, M, P
Ulmaceae – Elm Family		
**Ulmus parviflora* Jacq.	Chinese elm	A, Q, S
Urticaceae - Nettle Family		
Urtica dioica L. ssp. *holosericea* (Nutt.) Thorne	hoary nettle	K, L, O
Violaceae - Violet Family		
Viola aurea	golden violet	S
Viscaceae - Mistletoe Family		
Phoradendron villosum (Nutt.) Nutt.	oak mistletoe	M, P, Q, S
MONOCOTYLEDONS		
Agavaceae – Agave Family		
Hesperoyucca whipplei (Torrey) Trel.	chaparral candle	C, D, F
Cyperaceae - Sedge Family		
Cyperus eragrostis Lam.	tall flatsedge	K
Eleocharis macrostachya Britton	pale spike-rush	K
Juncaceae - Rush Family		
Juncus acutus L. ssp. *leopoldii* (Parl.) Snog.	southwestern spiny rush	K, N, O
Juncus arcticus var. *mexicanus*	Mexican rush	K
Liliaceae - Lily Family		
Calochortus splendens Benth.	splendid mariposa	A, H, P

Scientific Name	Common Name	Habitat
Poaceae - Grass Family		
* *Avena barbata* Link	slender wild oat	A, B, C, H, Q, S
* *Avena fatua* L.	wild oat	A, B, C, H, Q, S
* *Bromus diandrus* Roth	ripgut grass	A, B, C, H ,Q, S
* *Bromus madritensis* L. ssp. *rubens* (L.) Husnot	red brome, foxtail chess	A, B, C, D, E, F, G, H, Q, S
* *Bromus tectorum* L.	cheat grass, downy brome	A, B
* *Hordeum murinum* L. ssp. *leporinum* (Link) Arcang.	hare barley	A, B
Leymus triticoides (Buckley) Pilger	beardless wild ryegrass	K, L, N, P, S
* *Lolium multiflorum* Lam.	Italian ryegrass	A, B,H
Muhlenbergia rigens (Benth.) A. Hitchc.	deergrass	C, H, I
* *Poa bulbosa* L.	bulbous bluegrass	A, B, H
* *Triticum aestivum* L.	cereal wheat	A, B
* *Vulpia myuros* (L.) C. Gmelin var. *myuros*	rat-tail fescue	A, B, C, D, E, F, G, H, I, M, P, Q, S
Themidaceae – Brodiaea Family		
Dichelostemma capitatum Alph.Wood ssp. *capitatum*	blue dicks	C, D, F, Q, S
Typhaceae - Cat-Tail Family		
Typha latifolia L.	broad-leaved cattail	K
LYCOPHYTES		
Selaginellaceae - Spike-Moss Family		
Selaginella asprella	bluish-spike moss	S

REFERENCES

The scientific and common names utilized for the floral resources were noted according to the following nomenclature:

Baldwin BG, et al. 2009. Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California [Internet]. Jepson Flora Project, Jepson Online Interchange. University and Jepson Herbaria of the University of California at Berkely and Regents of the University of California. Available from: http://ucjeps.berkeley.edu/jepson_flora_project.html

APPENDIX 4. FAUNA SPECIES OBSERVED OR DETECTED

Habitat Types:

A = urban developed
B = general agriculture
C = Diegan coastal sage scrub
D = northern mixed chaparral
E = mafic northern mixed chaparral
F = chamise chaparral
G = montane chaparral
H = non-native grassland
I = foothill/mountain perennial grassland
J = montane meadow
K = freshwater marsh
L = southern riparian forest
M = southern coast live oak riparian forest
N = southern riparian scrub
O = southern willow scrub
P = coast live oak woodland
Q = mixed oak woodland
R = Sierran mixed coniferous forest
S = mixed oak/coniferous/bigcone/Coulter forest
T = Jeffery pine forest
FO = fly over

Abundance Codes (birds only):

A = Abundant: Almost always encountered in moderate to large numbers in suitable habitat and the indicated season.
C = Common: Usually encountered in proper habitat at the given season.
U = Uncommon: Infrequently detected in suitable habitat. May occur in small numbers or only locally in the given season.
R = Rare: Applies to species that are found in very low numbers.
"Numbers" indicate the number of individuals observed during the field survey work.

Status Codes (birds only):

M = Migrant: Uses the site for brief periods of time, primarily during the spring and fall months.
R = Year-round resident: Probable breeder on-site or in the vicinity.
S = Spring/summer resident: Probable breeder on-site or in the vicinity unless combined with transient status.
T = Transient: Uses site irregularly in summer but unlikely to breed. Not a true migrant and actual status often poorly known.
W = Winter visitor: Does not breed locally.
V = Casual vagrant: Not expected; out of normal geographic or seasonal range and by definition rare.

Common Name	Scientific Name	Habitat	Abundance	Status
AMPHIBIANS				
Hylidae (Treefrogs and Relatives)				
Pacific treefrog	*Pseudacris regilla*	K, L, M, X		
Ranidae (True Frogs)				
bullfrog	*Rana catesbeiana*	K, O		
REPTILES				
Phrynosomatidae				
western fence lizard	*Sceloporus occidentalis*	A, B, C, D, E, F, G, H, I, N, O, P, Q		
granite spiny lizard	*Sceloporus orcutti*	D		
side-blotched lizard	*Uta stansburiana*	A, B, C, D, E, F, G, H, I, N, O, P		
Anguidae (Alligator Lizards and Relatives)				
southern alligator lizard	*Elgaria multicarinata*	A, Q		
Colubridae (Colubrids)				
gophersnake	*Pituophis catenifer*	A, Q, X		
BIRDS				
Cathartidae (American Vultures)				
turkey vulture	*Cathartes aura*	FO C T, R		
Accipitridae (Hawks and Harriers)				
red-shouldered hawk	*Buteo lineatus*	A	C	R
red-tailed hawk	*Buteo jamaicensis*	A, B, C, D,P,Q, X	C	R, M, W

Common Name	Scientific Name	Habitat	Abundance	Status
Phasianidae (Quails, Pheasants, and Relatives)				
wild turkey	*Meleagris gallopavo*	A, B, D, H, Q, X	C	R
mountain quail	*Oreortyx pictus*	C, D, G, Q, X	C	R
Columbidae (Pigeons and Doves)				
band-tailed pigeon	*Patagoioenas fasciata*	Q, R, X	U	T
mourning dove	*Zenaida macroura*	A, B, C, D, F, Q	C	R
Trochilidae (Hummingbirds)				
Anna's hummingbird	*Calypte anna*	A, C, F, Q	C	R
Picidae (Woodpeckers and Wrynecks)				
acorn woodpecker	*Melanerpes formicivorus*	A, P, Q, R, X, T	C	R
Tyrannidae (Tyrant Flycatchers)				
western kingbird	*Tyrannus verticalis*	A, B, C, Q	C	M, S
Corvidae (Jays, Magpies, and Crows)				
western scrub-jay	*Aphelocoma californica*	A, C, D, F, M, O, Q, X	C	R
American crow	*Corvus brachyrhynchos*	A, B, C, Q, X	A	R
common raven	*Corvus corax*	A, B, C, O, Q, X	C	R
Hirundinidae (Swallows)				
purple martin	*Progne subis*	M, P, R, S	R	M, S
Paridae (Chickadees and Titmice)				
oak titmouse	*Baeolophus inornatus*	P, Q, X	C	R
mountain chickadee	*Poecile gambeli*	Q, X	C	R
Aegithalidae (Bushtit)				
bushtit	*Psaltriparus minimus*	P, Q, R, X	C	R

Common Name	Scientific Name	Habitat	Abundance	Status
Sittidae (Nuthatches)				
white-breasted nuthatch	*Sitta carolinensis*	P, T	C	R
pygmy nuthatch	*Sitta pygmaea*	P	C	R
Turdidae (Bluebirds and Thrushes)				
western bluebird	*Sialia mexicana*	A, P, Q, X	C	R, W
Sturnidae (Starlings)				
European starling	*Sturnus vulgaris*	A, B, Q, X	A	R
Cardinalidae (Grosbeaks, Buntings, and Relatives)				
black-headed grosbeak	*Pheucticus melanocephalus*	Q, X	C	M, S
Emberizidae (Sparrows, Blackbirds and Relatives)				
California towhee	*Pipilo crissalis*	C, D, F, Q	C	R
spotted towhee	*Pipilo maculates*	D, F, Q	C	R
dark-eyed junco	*Junco hyemalis*	P, Q, X	C	R, M, W
Icteridae (Blackbirds, Meadowlarks, Orioles, and Relatives)				
Bullock's oriole	*Icterus bullockii*	M, P	C	M, S, W
great-tailed grackle	*Quiscalus mexicanus*	A, B, Q, X	U	R
MAMMALS				
Sciuridae (Squirrels)				
western gray squirrel	*Sciurus griseus anthonyi*	A, B, C, D, F, H, M, P, Q, R, X		
California ground squirrel	*Spermophilus beecheyi nudipes*	C, D, H, M, P, Q, R		
Cricetidae (New World Rats And Mice, Voles, Hamsters, and Relatives)				
woodrat	*Neotoma* sp.	M, P, R, S		

Common Name	Scientific Name	Habitat	Abundance	Status
Felidae (Cats)				
mountain lion	*Puma concolor californicus*	Q		
Canidae (Coyotes, Dogs, Foxes, Jackals, and Wolves)				
feral/domestic dog	*Canis familiaris*	A, B, Q, X		
coyote	*Canis latrans clepticus*	B, C, F		
Cervidae (Deer)				
mule deer	*Odocoileus hemionus fuliginata*	A, C, F, Q		

REFERENCES

The scientific and common names utilized for the faunal resources were noted according to the following nomenclature:

American Ornithologists' Union. 1998. Check-list of North American Birds, 7th ed. American Ornithologists' Union, Washington D.C.

_____. 2009. Fiftieth Supplement to the American Ornithologists' Union *Check-list of North American Birds* [Internet]. Auk 126(3):705-714. Available from: http://www.aou.org/checklist/north/index.php.

Crother BI (ed.). 2000 (2001). Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico, with Comments Regarding Confidence in Our Understanding. SSAR Herpetological Circular 29.iii +82 pp.

Crother BI, Boundy J, Campbell JA, De Quieroz K, Frost D, Green DM, Highton R, Iverson JB, McDiarmid RW, Meylan PA, Reeder TW, Seidel ME, Sites JW Jr., Tilley SG, Wake DB. 2003. Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico: Update. Herpetological Review 2003, 34(3), 196-203.

Klein MW, San Diego Natural History Museum. 2002. Butterflies of San Diego County [Internet]. Available from: http://www.sdnhm.org/research/entomology/sdbutterflies.html.

Opler PA, Lotts K., Naberhaus T. coordinators. 2010. Butterflies and Moths of North America [Internet]. Bozeman, MT: Big Sky Institute. Available from: http://www.butterfliesandmoths.org/.

Oklahoma State University Department of Animal Science. 2000. Scientific Names of Domestic Animals. Available from: http://www.ansi.okstate.edu/resource-room/general/all/scientificnames.htm.

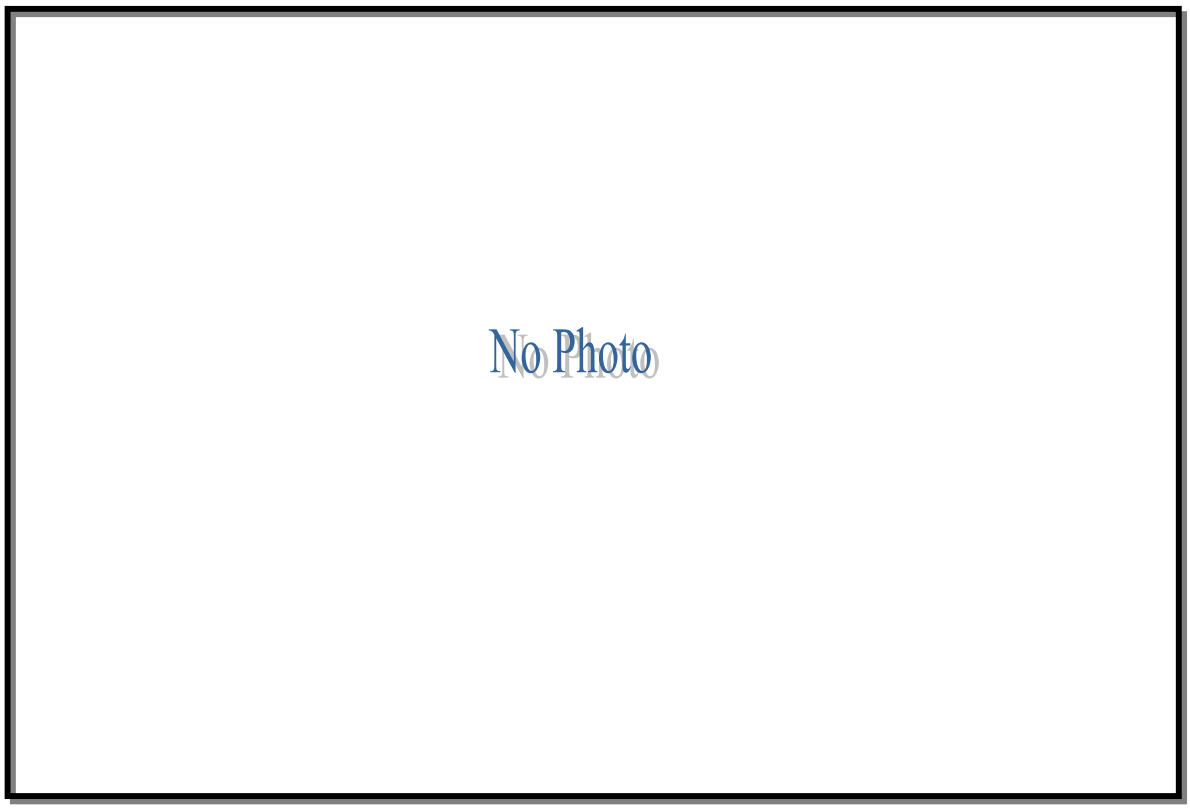
APPENDIX 5. WILDLIFE TREE PHOTOGRAPHS

APN 294-012-20. Wildlife tree with an identified active nest of the special status species, purple martin.

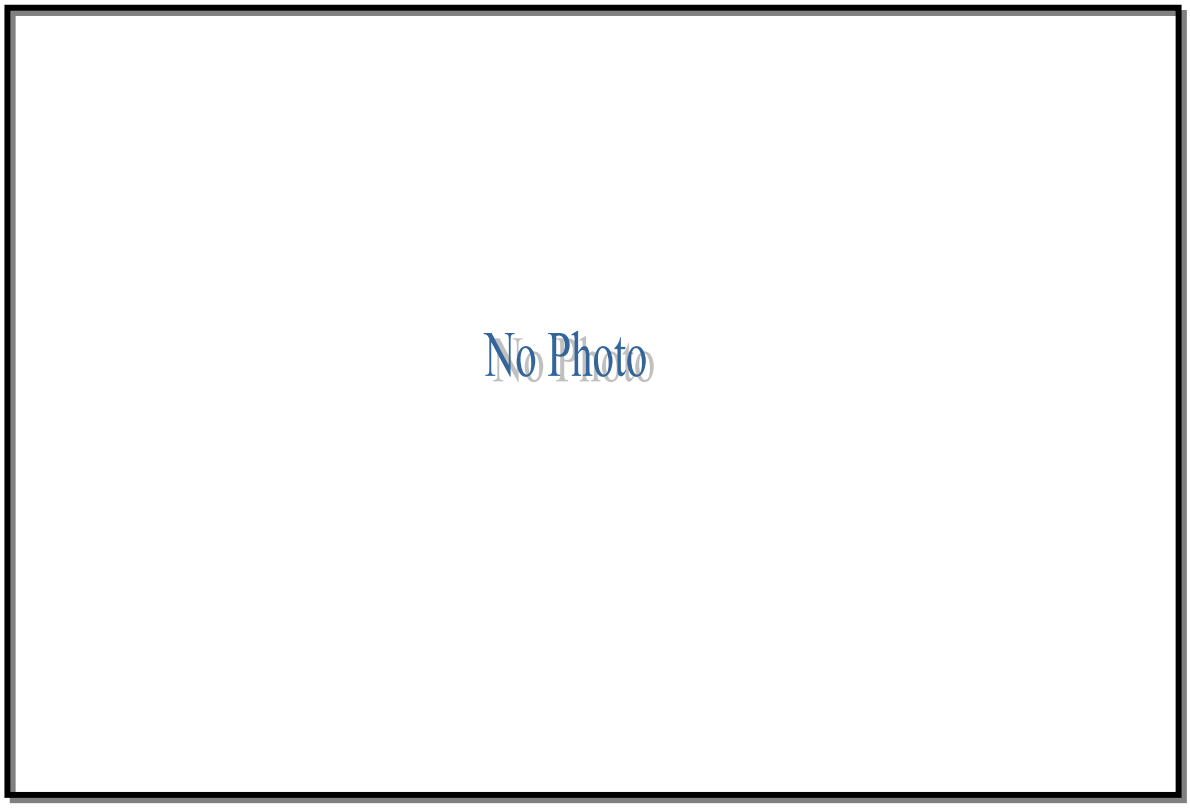
APN 294-012-32. Wildlife tree marked being utilized as a grainery containing many acorns.

APN 294-012-19. Wildlife tree marked being utilized as a grainery containing many acorns.

APN 294-030-03. Wildlife tree containing the only snag in the immediate area.



APN 294-030-03. Wildlife tree marked as unique to the immediate project area.



APN 294-030-03. Wildlife tree marked as unique to the immediate project area.

APN 291-160-14. Wildlife tree located adjacent to a woodrat nest with an unidentified woodrat species [i.e., species likely the common dusky-footed woodrat (*Neotoma fuscipes macrotis*) based on the nest structure and components; however, species has the potential to be the special status, San Diego desert woodrat (*Neotoma lepida intermedia*)].

APN 250-150-23. Wildlife tree marked being utilized as a grainery containing many acorns.

APN 250-111-06. Wildlife tree marked as unique to the immediate area, with a large snag and several potential nesting cavities.

APPENDIX 6. CNDDB FORMS

Mail to:
California Natural Diversity Database
Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95811
Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov

Date of Field Work (mm/dd/yyyy): 04/19/2010

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Viola aurea*

Common Name: golden violet

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 60+ Subsequent Visit? ☐ yes ☑ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☐ no ☐ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Ed Ervin
Address: 5434 Ruffin Rd. San Diego CA 92123
E-mail Address: eervin@merkelinc.com
Phone: (858) 560-5465

Plant Information

Phenology: 15 % vegetative 75 % flowering 10 % fruiting

Animal Information

_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ wintering ☐ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

Location Description ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: San Diego Landowner / Mgr.: private

Quad Name: _____ Elevation: _____

T 12S R 4E Sec 32, ____ ¼ of ____ ¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____

T____ R____ Sec ____, ____ ¼ of ____ ¼, Meridian: H☐ M☐ S☐ GPS Make & Model Trimble® geoexplorer GPS unit

DATUM: **NAD27** ☐ **NAD83** ☑ **WGS84** ☐ Horizontal Accuracy _____ meters/feet

Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☑ ***OR*** Geographic (Latitude & Longitude) ☐

Coordinates: APNs: 250-150-01 (538046.718999, 3660832.64886), 250-150-15 (538177.640110, 3660689.64273)

Habitat Description (plants & animals) *plant communities, dominants, associates, substrates/soils, aspects/slope:*
Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

Habitat description: Oak woodland/montane chaparral. Dominants: Quercus agrifolia, Arctostaphylos glauca

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use:

Visible disturbances:

Threats:

Comments:

Determination: *(check one or more, and fill in blanks)*

- ☐ Keyed (cite reference): _____
- ☐ Compared with specimen housed at: _____
- ☐ Compared with photo / drawing in: _____
- ☑ By another person (name): Ed Ervin
- ☐ Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☑
Habitat	☐	☐	☑
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☐ no ☐

Mail to:
California Natural Diversity Database
Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95811
Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov

Date of Field Work (mm/dd/yyyy): 06/15/2010

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Juncus acutus ssp. leopoldii*

Common Name: southwestern spiny rush

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 6-8 Subsequent Visit? ☐ yes ☑ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Mary Tamburro
Address: 5434 Ruffin Rd San Diego CA 92123
E-mail Address: mtamburro@merkelinc.com
Phone: (858) 560-5465

Plant Information

Phenology: 50 % vegetative 25 % flowering 25 % fruiting

Animal Information

_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ wintering ☐ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

Location Description ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: San Diego Landowner / Mgr.: Private
Quad Name: _____ Elevation: _____
T 12S R 4E Sec 32, ____ ¼ of ____ ¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____
T____ R____ Sec ____, ____ ¼ of ____ ¼, Meridian: H☐ M☐ S☐ GPS Make & Model Trimble® geoexplorer GPS unit
DATUM: NAD27 ☐ NAD83 ☑ WGS84 ☐ Horizontal Accuracy _____ meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☑ ***OR*** Geographic (Latitude & Longitude) ☐
Coordinates: APN:407-100-50 (538444.593977, 3637469.84440)

Habitat Description (plants & animals) *plant communities, dominants, associates, substrates/soils, aspects/slope:*
Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*
Habitat description: found on edge of marsh. Dominants: Typha latifolia

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor
Immediate AND surrounding land use:
Visible disturbances: Obvious walking paths throughout the edge of the marsh/riparian habitat.
Threats:
Comments:

Determination: *(check one or more, and fill in blanks)*
☑ Keyed (cite reference): Jepson
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☐
Habitat	☐	☐	☑
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☐ no ☐

Mail to:
California Natural Diversity Database
Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95811
Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov

Date of Field Work (mm/dd/yyyy): 04/15/2010

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Selaginella asprella*

Common Name: bluish-spike moss

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals _____ Subsequent Visit? ☐ yes ☑ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Mary Tamburro
Address: 5434 Ruffin Rd. San Diego CA 92123
E-mail Address: marytamburro@merkelinc.com
Phone: (858) 560-5465

Plant Information

Phenology: 15 % vegetative 75 % flowering 10 % fruiting

Animal Information

_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ wintering ☐ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

Location Description ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: San Diego Landowner / Mgr.: Private

Quad Name: _____ Elevation: _____

T 12S R 4E Sec 29, ____ ¼ of ____ ¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____

T 12S R 4E Sec 32, ____ ¼ of ____ ¼, Meridian: H☐ M☐ S☐ GPS Make & Model Trimble® geoexplorer GPS unit

DATUM: **NAD27** ☐ **NAD83** ☑ **WGS84** ☐ Horizontal Accuracy _____ meters/feet

Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☑ ***OR*** Geographic (Latitude & Longitude) ☐

Coordinates: APN #: 250-020-08 (538316.390988, 3661931.92303), 250-111-08 (537999.278020, 3661059.76194), 250-150-01 (538046.718999, 3660832.64886), 250-150-16 (537706.324112, 3660807.13603)

Habitat Description (plants & animals) *plant communities, dominants, associates, substrates/soils, aspects/slope:*
Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

Habitat description: Oak woodland. Dominants: Quercus agrifolia

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use:

Visible disturbances:

Threats:

Comments:

Determination: *(check one or more, and fill in blanks)*

- ☐ Keyed (cite reference): _____
- ☐ Compared with specimen housed at: _____
- ☐ Compared with photo / drawing in: _____
- ☑ By another person (name): Ed Ervin and Bonnie Peterson
- ☐ Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☑
Habitat	☐	☐	☑
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☐ no ☐

Mail to:
California Natural Diversity Database
Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95811
Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov

Date of Field Work (mm/dd/yyyy): 04/15/2010

For Office Use Only

Source Code _____ Quad Code _____

Elm Code _____ Occ. No. _____

EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Progne subis*

Common Name: purple Martin

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 2 Subsequent Visit? ☐ yes ☑ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Mary Tamburro

Address: 5434 Ruffin Rd. San Diego CA 92123

E-mail Address: marytamburro@merkelinc.com

Phone: (858) 560-5465

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

2 # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ wintering ☐ breeding ☑ nesting ☐ rookery ☐ burrow site ☐ other

Location Description ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: San Diego Landowner / Mgr.: Private

Quad Name: _____ Elevation: _____

T 14S R 4E Sec 22, ____ ¼ of ____ ¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____

T____ R____ Sec ____, ____ ¼ of ____ ¼, Meridian: H☐ M☐ S☐ GPS Make & Model Trimble® geoexplorer GPS unit

DATUM: **NAD27** ☐ **NAD83** ☑ **WGS84** ☐ Horizontal Accuracy _____ meters/feet

Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☑ ***OR*** Geographic (Latitude & Longitude) ☐

Coordinates: APN #: 294-012-20 (540721.302940, 3654703.39472)

Habitat Description (plants & animals) *plant communities, dominants, associates, substrates/soils, aspects/slope:*

Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

Habitat description: Montane woodland/forest.

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use:

Visible disturbances:

Threats:

Comments:

Determination: *(check one or more, and fill in blanks)*

- ☐ Keyed (cite reference): _____
- ☐ Compared with specimen housed at: _____
- ☐ Compared with photo / drawing in: _____
- ☑ By another person (name): Joe Thompson
- ☐ Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☐
Habitat	☐	☐	☑
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☐ no ☐

APPENDIX 7. OCCURRENCE POTENTIAL OF SPECIAL STATUS PLANT SPECIES

Key to abbreviations:

Federal Endangered Species Act (ESA)
FE = Federally-listed as Endangered
FT = Federally-listed as Threatened
FPE = Federally proposed for listing as Endangered
FPT = Federally proposed for listing as Threatened
FPD = Federally proposed for delisting
FC = Federal candidate species
SC = Species of concern
Delisted species are monitored for 5 years

California Endangered Species Act (CESA)
SE = State-listed as Endangered
ST = State-listed as Threatened
SCE = State candidate for listing as Endangered
SCT = State candidate for listing as Threatened
SCD = State candidate for de-listing
SR = California Rare Species

California Natural Diversity Database (CNDDB)
SP = Special Plant

U.S. Forest Service (USFS)
S = Sensitive

California Department of Fish and Game (DFG)
SSC = Species of Special Concern
FP = California fully protected species
WL = Watch List

California Native Plant Society (CNPS)
List 1A = Plants presumed extinct in California
List 1B = Plants rare, threatened, or endangered in California and elsewhere
List 2 = Plants rare, threatened, or endangered in California, but more common elsewhere
List 3 = Plants about which more information is needed (a review list)
List 4 = Plants of limited distribution (a watch list)

Multiple Species/Habitat Conservation Program (MSCP)/(MHCP)
NE = Narrow Endemic
CS = Covered Species
CP = Critical Population

County of San Diego
Plant List A = Plants rare, threatened or endangered in California and elsewhere
Plant List B = Plants rare, threatened or endangered in California but more common elsewhere
Plant List C = Plants which may be quite rare, but need more information to determine their true rarity status
Plant List D = Plants of limited distribution and are uncommon, but not presently rare or endangered
Animal Group 1 = Animals rare, threatened or endangered in California and elsewhere
Animal Group 2 = Animals rare, threatened or endangered in California but more common elsewhere

Scientific Name **Common Name**	**Sensitivity Codes and Status[1, 2]**	**Habitat Preferences/Requirements[3]**	**Verified On-Site**	**Potential To Occur On-Site**	**Factual Basis For Determination Of Occurrence Potential**
PLANTS					
Androsace elongata ssp. *acuta* California androsace	CNDDB: SP CNPS List: 4 Cnty of SD List: D	Native, annual herb that grows in openings in chaparral, coastal scrub, cismontane woodland, and pinyon and juniper woodland, as well as meadows and grasslands, at elevations ranging from 150-1,200 meters (492-3,937 feet); blooming period Mar-Jun.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Project area is generally above the elevation range for this species.
Arabis hirshbergiae Hirshberg's rock cress	CNDDB: SP CNPS List: 1B Cnty of SD List: A	Native/CA endemic, perennial herb that grows in the pebble plain microhabitat of Lake Cuyamaca on cobbles and gravel of gabbro and quartzite, at an elevation of 1,400 meters (4,600 feet); blooming period Mar-May.	No	Moderate	No CNDDB records in the Project Area (CDFG 2009a). Species has a potential to occur on the APNs/operation units near Cuyamaca Reservoir and the gabbro soils to the south.
Arctostaphylos rainbowensis Rainbow manzanita	USFS List: Sensitive CNDDB: SP CNPS List: 1B Cnty of SD List: A	Native/CA endemic, evergreen shrub that prefers chaparral with a relatively dense canopy from six to eight feet being common at elevations ranging from 225-670 meters (738-2,198 feet); blooming period Dec-Mar.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Project area is generally above the elevation range for this species.
Astragalus oocarpus San Diego milkvetch	USFS List: Sensitive CNDDB: SP CNPS List: 1B Cnty of SD List: A	Native/CA endemic, perennial herb that typically grows in chaparral and woodland edges along the periphery of meadows, at elevations ranging from 305-1524 meters (1,000-5,000 feet); blooming period May-Aug.	No	Low	CNDDB records are present in the Project Area (CDFG 2009a); however, most montane meadow habitat has been excluded from the operation units.
Astragalus pachypus var. *jaegeri* Jaeger's milk-vetch	USFS List: Sensitive CNDDB: SP CNPS List: 1B Cnty of SD List: A	Native/CA endemic, shrub that occurs in rocky/sandy grasslands and the understory of chaparral, sage scrub, and cismontane woodland on gabbro soils, at elevations ranging from 365-915 meters (1,197-3,002 feet); blooming period Dec-Jun.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Project Area is generally above the elevation range for this species.

Scientific Name **Common Name**	**Sensitivity Codes and Status[1, 2]**	**Habitat Preferences/Requirements[3]**	**Verified On-Site**	**Potential To Occur On-Site**	**Factual Basis For Determination Of Occurrence Potential**
Berberis nevinii Nevin's barberry	ESA: FE CESA: FE CNDDB: SP CNPS List: 1B Cnty of SD List: A	Native/CA endemic, evergreen shrub that occurs in sandy/gravelly areas along the margins of dry washes and coarse soils in chaparral, at elevations ranging from 274-825 meters (898-2,706 feet); current range extends from the foothills of the San Gabriel Mountains to the foothills of the Santa Ana and Palomar Mountains; blooming period Mar-Jun.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Project Area is generally above the elevation range for this species.
Boykinia rotundifolia Round leaved boykinia	USFS List: Watch	Native, perennial herb that prefers streambanks and wet places in chaparral and forest habitat, at elevations below 2,000 meters (6,562 feet); blooming period Jun-Jul.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Most of the typical habitat of this species is excluded from the operation units.
Brodiaea orcuttii Orcutt's brodiaea	USFS List: Sensitive CNDDB: SP CNPS List: 1B Cnty of SD List: A	Native, perennial, bulbiferous/corm sprouting herb that prefers vernally moist grasslands, mima mound topography, and the periphery of vernal pools, but will occasionally grow on streamside embankments, and has also been found in mesic grasslands and openings within chaparral, at elevations ranging from 30-1,692 meters (98-5,551 feet); blooming period May-Jul.	No	Low	CNDDB records are present in the Project Area (CDFG 2009a); however, the typical habitat of this species has been excluded from the operation units.
Calochortus dunnii Dunn's mariposa lily	USFS List: Sensitive CESA: SR CNDDB: SP CNPS List: 1B Cnty of SD List: A	Native, perennial, bulbiferous herb that is restricted to gabbro and metavolcanic derived soils or sandstone in closed-cone coniferous forest, rocky openings in chaparral, and chaparral/grassland ecotone habitat, at elevations ranging from 380-1,830 meters (1,246-6,004 feet); blooming period Apr-Jun.	No	Moderate	CNDDB records are present in the Project Area (CDFG 2009a). There are inclusions of gabbro soil along the southern portions of the SR 78/79 Corridor.
Castilleja lasiorhyncha San Bernardino mountains owl's-clover	CNDDB: SP CNPS List: 1B	Native/CA endemic, annual herb that grows on pebble plain in chaparral, meadows, seeps, riparian woodland, and mesic upper montane coniferous forest, at elevations ranging from 1,300-2,390 meters (4,265-7,842); blooming period May-Aug.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Most of the typical habitat of this species is excluded from the operation units.

Scientific Name **Common Name**	**Sensitivity Codes and Status[1, 2]**	**Habitat Preferences/Requirements[3]**	**Verified On-Site**	**Potential To Occur On-Site**	**Factual Basis For Determination Of Occurrence Potential**
Caulanthus simulans Payson's jewelflower	USFS List: Sensitive CNDDB: SP CNPS List: 4 Cnty of SD List: D	Native, annual herb that grows in soils within chaparral and sage scrub and along streambeds on steep, rocky slopes, at elevations ranging from 90-2,220 meters (295-7,280 feet); blooming period Mar-May.	No	Moderate	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat is present throughout the Project Area.
Chaenactis parishii Parish's pincushion flower/ Parish's chaenactis	CNDDB: SP CNPS List: 1B Cnty of SD List: A	Native, perennial herb that grows in open, rocky chaparral with little competition from perennial shrubs, at elevations ranging from 1,300-2,500 meters (4,265-8,203 feet); blooming period May-Jul.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Most chaparral openings within the Project area were covered with perennial invasive grasses.
Chorizanthe leptotheca Ramona (= peninsular) spineflower	CNDDB: SP CNPS List: 4 Cnty of SD List: D	Native, tiny, annual herb typically found in xeric openings in chamise chaparral, as well as sage scrub and lower montane coniferous forest on alluvial fan/granitic substrate, at elevations ranging from 300-1,900 meters (984-6,233 feet); blooming period May-Aug.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Most of the typical habitat of this species is excluded from the operation units.
Chorizanthe polygonoides longispina long-spined spineflower	CNPS List: 1B CNDDB: SP Cnty of SD List: A	Native, annual herb typically found on small clay lenses that are largely devoid of shrubs; can be occasionally seen on the periphery of vernal pool habitat and even on the periphery of montane meadows near vernal seeps; blooming period Apr-Jul.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). The typical habitat of this species has been excluded from the operation units.
Clarkia delicata delicate/campo clarkia	USFS List: Sensitive CNDDB: SP CNPS List: 1B Cnty of SD List: A	Native, annual herb that prefers the periphery of oak woodlands and cismontane chaparral, typically in more mesic areas, at elevations ranging from 235-1,000 meters (771-3,281 feet); blooming period Apr-Jun.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Project Area is generally above the elevation range for this species.

Scientific Name **Common Name**	**Sensitivity Codes and Status[1, 2]**	**Habitat Preferences/Requirements[3]**	**Verified On-Site**	**Potential To Occur On-Site**	**Factual Basis For Determination Of Occurrence Potential**
Cupressus stephensonii Cuyamaca cypress	USFS List: Sensitive CNDDB: SP CNPS List: 1B Cnty of SD List: A	Native, evergreen tree that typically grows in gabbro derived, clay soils on steep slopes along drainages in closed cone coniferous forest often surrounded by montane chaparral, at elevations ranging from 1,035-1,705 m (3,395-5,594 ft).	No	Low	No CNDDB records in the Project Area (CDFG 2009a). There are inclusions of gabbro soil along the southern corridor of the SR 78/79 portions of the project area, but distinctive tree not observed.
Cupressus forbesii Tecate cypress	USFS List: S CNDDB: SP CNPS List: 1B MSCP: CS Cnty of SD List: A	Native, distinctive, evergreen tree that occurs in closed-cone coniferous forest and chaparral on clay, gabbroic and metavolcanic derived soils, generally following moist canyons and drainages on north-facing slopes, at elevations ranging from 255-1,500 meters (837-4,922 feet).	No	Low	No CNDDB records in the Project Area (CDFG 2009a). There are inclusions of gabbro soil along the southern portions of the SR 78/79 Corridor, but distinctive tree not observed.
Deinandra (=*Hemizonia*) *mohavensis* Mojave tarplant	CESA: SE USFS List: Sensitive CNDDB: SP CNPS List: 1B Cnty of SD List: A	Native, small, annual herb that grows on sandy/gravelly soils along washes and mesic areas of chaparral, at elevations ranging from 640-1,600 meters (2,099-5,249 feet); endemic to San Bernardino, San Jacinto, and Palomar Mountains; blooming period Jul-Oct.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Project Area is outside of species endemic region.
Delphinium hesperium ssp. *cuyamacae* Cuyamaca larkspur	USFS List: Sensitive CDFG: SR CNDDB: SP CNPS List: 1B Cnty of SD List: A	Native/CA endemic, perennial herb that occurs along dry edges and in relatively densely vegetated, montane meadow and vernal pool habitat, at elevations ranging from 1,220-1,631 meters (4,022-5,351 feet); blooming period May-Jul.	No	Low	CNDDB records are present in the Project Area exist (CDFG 2009a); however, most montane meadow habitat has been excluded from the operation units.
Downingia concolor var. *brevior* Cuyamaca Lake downingia (=meadowfoam)	CESA: SE CNDDB: SP CNPS List: 1B Cnty of SD List: A	Native/CA endemic, annual herb that grows in the montane meadows on the periphery of Cuyamaca Lake, at elevations ranging from 1,380-1,500 meters (4,528-4,921 feet); blooming period May-Jul.	No	Low	CNDDB records are present in the Project Area exist (CDFG 2009a); however, most of the operational units around Cuyamaca Reservoir exclude montane meadow habitat.

Scientific Name **Common Name**	**Sensitivity Codes and Status[1, 2]**	**Habitat Preferences/Requirements[3]**	**Verified On-Site**	**Potential To Occur On-Site**	**Factual Basis For Determination Of Occurrence Potential**
Dudleya alainae banner dudleya	CNDDB: SP CNPS List: 3	Native, succulent, perennial herb that grows in chaparral and lower montane coniferous forest ectone habitat, as well as Sonoran desert scrub, at elevations ranging from 740-1,200 meters (2,428-3,937 feet); blooming period May-Jul.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Project Area is generally above the elevation range for this species.
Ericameria cuneata var. *macrocephala* Laguna Mountain goldenbush	CNDDB: SP CNPS List: 1B Cnty of SD List: A	Native/CA endemic shrub that grows in clusters around rocky knolls in montane chaparral, at elevations ranging from 1,195-1,850 meters (3,920-6,069 feet); blooming period Sep-Dec.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present in limited montane chaparral within the Project Area.
Eriogonum (=foliosum) evandium leafy buckwheat/ vanishing wild buckwheat	CNDDB: SP CNPS List: 1B Cnty of SD List: A	Native, annual herb that grows in chaparral cismontane woodland, lower montane coniferous forest, and sandy soils of pinyon and juniper woodland, at elevations ranging from 1,100-2,225 meters (3,609-7,300 feet); blooming period Jul-Oct.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). The typical habitat of this species is not found within the Project area.
Galium johnstonii Johston's bedstraw	USFS List: Watch CNDDB: SP CNPS List: 4 Cnty of SD List: D	Native/CA endemic, perennial herb that occurs in montane coniferous forest, at elevations ranging from 1,220-2,300 meters (4,002-7,546 feet); blooming period Jun-Jul.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). The typical habitat of this species is not found within the Project area.
Geraea viscida sticky geraea	CNDDB: SP CNPS List: 2 Cnty of SD List: B	Native, perennial herb that grows in disturbed areas of chaparral, at elevations ranging from 450-1,700 meters (1,476-5,577 feet); blooming period May-Jun.	No	Moderate	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present.
Githopsis diffusa ssp. *filicaulis* Mission Canyon blue-cup	USFS List: Sensitive CNDDB: SP CNPS List: 3 Cnty of SD List: D	Native, cryptic, annual herb that typically occurs in isolated, sandy openings in chaparral, at elevations ranging from 450-700 meters (1,476-2,296 feet); blooming period Apr-Jun.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Project Area is generally above the elevation range for this species.

Scientific Name **Common Name**	**Sensitivity Codes and Status[1, 2]**	**Habitat Preferences/Requirements[3]**	**Verified On-Site**	**Potential To Occur On-Site**	**Factual Basis For Determination Of Occurrence Potential**
Grindelia hirsutula var. *hallii* San Diego/ Hall's gumplant	CNDDB: SP CNPS List: 1B Cnty of SD List: A	Native/CA endemic, perennial herb that typically prefers sunny openings and mesic areas on sandy or clay soils in montane meadows and dry slopes in lower montane coniferous forest, chaparral, and grassland, at elevations ranging from 185-1,745 meters (606-5,725 feet); blooming period Jul-Oct.	No	Med	CNDDB records present in the Project Area exist (CDFG 2009a); however, Most of the typical habitat of this species is excluded from the operation units.
Harpagonella palmeri Palmer's grappling hook	CNDDB: SP CNPS List: 4 Cnty of SD List: D	Native, inconspicuous annual, herb that typically occurs on clay vertisols with open grassy slopes in open sage scrub or chaparral, at elevations ranging from 20-955 meters (65-3,133 feet); blooming period Mar-May.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Project Area is generally above the elevation range for this species.
Heterotheca sessiliflora ssp. *sanjacintensis* San Jacinto golden aster	Cnty of SD List: D	Native, perennial herb that occurs in the northern mountain ecoregion of San Diego County, within mixed chaparral and coniferous forest habitat.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Project Area generally located outside of this species' range.
Heuchera brevistaminea Laguna Mountains alumroot	CNDDB: SP CNPS List: 1B Cnty of SD List: A	Broadleaved upland forest, chaparral, cismontane woodland, riparian scrub/rocky; elevation 1370-2000 meters. Perennial herb (rhizomatous), blooms April-September	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Most of the typical habitat of this species is excluded from the operation units.
Heuchera rubescens var. *versicolor* San Diego County alumroot	CNDDB: SP CNPS List: 2 Cnty of SD List: B	Chaparral, lower montane coniferous forest/rocky; elevation 1500-4000 meters. Perennial herb (rhizomatous), blooms May-June	No	Moderate	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present.
Hulsea californica San Diego (California) sunflower	CNDDB: SP CNPS List: 1B Cnty of SD List: A	Native/CA endemic, perennial herb that follows fires in chaparral and openings in montane coniferous forest, at elevations ranging from 915-2,915 meters (3,002-9,564 feet); blooming period Apr-Jun.	No	Moderate	CNDDB records present in the Project Area (CDFG 2009a). Potentially suitable habitat present.
Hulsea vestita ssp. *callicarpha* Beautiful hulsea	USFS List: Watch CNDDB: SP CNPS List: 4 Cnty of SD List: D	Native/CA endemic, perennial herb that grows in mildly disturbed or rocky locales in chaparral and lower montane coniferous forest at elevations ranging from 915-3050 meters (3,002-10,007 feet), and may regularly occur as a fire follower; blooming period May-Oct.	No	Moderate	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present.

Scientific Name **Common Name**	**Sensitivity Codes and Status[1, 2]**	**Habitat Preferences/Requirements[3]**	**Verified On-Site**	**Potential To Occur On-Site**	**Factual Basis For Determination Of Occurrence Potential**
Hymenothrix wrightii Wright's hymenothrix	CNDDB: SP CNPS List: 4 Cnty of SD List: D	Native, small, perennial herb that grows in open, somewhat arid slopes near montane meadows and in montane chaparral openings near cismontane woodland and coniferous forest, at elevations ranging from 1,400-1,550 meters (4,593-5,085 feet); blooming period Jun-Oct.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Most of the typical habitat of this species is excluded from the operation units.
Juncus acutus ssp. *leopoldii* spiny rush/ southwestern spiny rush	CNDDB: SP CNPS List: 4 Cnty of SD List: D	Native, distinctive, large, perennial herb that occurs in coastal dunes, meadows, marshes, seeps, marshes, and swamps, at elevations generally ranging from 2-900 meters (10-2,952); blooming period May-Jun.	Yes	Present	Identified on APN 407-100-50.
Lewisia brachycalyx short-sepaled lewisia	CNDDB: SP CNPS List: 2 Cnty of SD List: B	Native, perennial herb that grows in meadows or mesic areas of lower montane coniferous forest, at elevations ranging from 1,370-2,300 meters (4,495-7,546 feet); blooming period Feb-Jun.	No	Low	CNDDB records present in the Project Area (CDFG 2009a). Most of the typical habitat of this species is excluded from the operation units.
Lessingia glandulifera var. *tomentosa* Warner Springs lessingia	CNDDB: SP CNPS List: 1B Cnty of SD List: A	Native, annual herb that primarily grows in sandy openings in high desert or xeric chamise chaparral or grassland, at elevations ranging from 870-1,220 meters (2,854-4,002 feet); blooming period Aug-Oct.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Project Area is generally above the elevation range for this species.
Lilium humboldtii ssp. *ocellatum* Ocellated humboldt lily	USFS List: Watch CNDDB: SP CNPS List: 4 Cnty of SD List: D	Native/CA endemic, bulbiferous herb that grows along streamsides in lower montane coniferous forest, cismontane/riparian woodland, and montane chaparral or sage scrub, at elevations ranging from 30-1,800 meters (98-5,095 feet); blooming period Mar-Jul.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Most of the typical habitat of this species is excluded from the operation units.
Linanthus bellus desert beauty	CNDDB: SP CNPS List: 2 Cnty of SD List: B	Native, perennial herb that grows in sandy openings of chaparral, at elevations ranging from 1,000-1,400 meters (3,281-4,593 feet); blooming period Apr-May.	No	Moderate	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present in the Whispering Pines community.

Scientific Name **Common Name**	**Sensitivity Codes and Status[1, 2]**	**Habitat Preferences/Requirements[3]**	**Verified On-Site**	**Potential To Occur On-Site**	**Factual Basis For Determination Of Occurrence Potential**
Limnanthes gracilis ssp. *parishii* Parish's (=Cuyamaca) meadowfoam	USFS List: Sensitive CESA: SE CNDDB: SP CNPS List: 1B Cnty of SD List: A	Native/CA endemic, annual herb that occurs in montane meadows, which are largely devoid of shrubs and contain concentrations of annuals and herbaceous perennials, not grasses, surrounded by coniferous forest, at elevations ranging from 600-2,000 meters (1,968-6,562 feet); blooming period Apr-Jun.	No	Low	CNDDB records present in the Project Area (CDFG 2009a). Most montane meadow habitat is excluded from the operation units.
Linanthus orcuttii Orcutt's linanthus	USFS List: Sensitive CNDDB: SP CNPS List: 1B Cnty of SD List: A	Native, small and showy, annual herb that typically grows in openings in montane chaparral, lower montane coniferous forest, and pinyon-juniper woodland, at elevations ranging from 915-2,145 meters (3,002-7,037 feet); blooming period May-Jun.	No	Low	CNDDB records present in the Project Area (CDFG 2009a). Most of the typical habitat of this species is excluded from the operation units.
Dieteria (=*Machaeranthera*) *asteroids* var. *lagunensis* Laguna Mountains aster/ Mount Laguna aster	CESA: SR CNDDB: SP CNPS List: 2 Cnty of SD List: B	Native, perennial herb that grows in the cismontane woodland and lower montane coniferous forest on Mount Laguna, at elevations ranging from 800-2,400 meters (2,624-7,874 feet); blooming period Jul-Aug.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Project Area generally located outside of this species' range.
Malacothamnus aboriginum Indian Valley bush mallow	CNDDB: SP CNPS List: 1B Cnty of SD List: A	Native, deciduous shrub that grows in chaparral and rocky cismontane woodland, often in burned areas, at elevations ranging from 150-1,700 meters (492-5,578 feet); blooming period Apr-Oct.	No	Moderate	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present.
Monardella hypoleuca ssp. *lanata* Felt-leaved monardella (= rock mint)	USFS List: Sensitive CNDDB: SP CNPS List: 1B Cnty of SD List: A	Native, rhizomatous herb that typically occurs on gabbro soils in the understory of chaparral, beneath mature stands of chamise in xeric situations, and cismontane woodland, at elevations ranging from 300-1,575 meters (984-5,167 feet); blooming period Jun-Aug.	No	Moderate	No CNDDB records in the Project Area (CDFG 2009a). There are inclusions of gabbro soil along the southern corridor of the SR 78/79 portions of the project area.
Mimulus clevelandii Cleveland's bush/ monkey flower	CNDDB: SP CNPS List: 4 Cnty of SD List: D	Native, showy, perennial, rhizomatous herb that occurs in zeric, open locales in chamise dominated chaparral with exposed rock and shallow soils, as well as cismontane woodland and lower montane coniferous forest, at elevations ranging from 815-2,000 meters (2,674-6,562 feet); blooming period Apr-Jul.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Most of the typical habitat of this species is excluded from the operation units.

Scientific Name **Common Name**	**Sensitivity Codes and Status[1, 2]**	**Habitat Preferences/Requirements[3]**	**Verified On-Site**	**Potential To Occur On-Site**	**Factual Basis For Determination Of Occurrence Potential**
Mimulus palmeri (=*diffusus*) Palomar monkey flower	CNDDB: SP CNPS List: 4 Cnty of SD List: D	Native, small but colorful annual herb that typically grows in sandy or gravelly soils of lower montane coniferous forest and chaparral, at elevations ranging from 1,220-1,830 meters (4,002-6,004 feet); blooming period Apr-Jun.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Most of the typical habitat of this species is excluded from the operation units.
Monardella macrantha ssp. *hallii* Hall's monardella	USFS List: Sensitive CNDDB: SP CNPS List: 1B Cnty of SD List: A	Native, small, perennial, rhizomatous herb that generally occurs in rocky areas and openings in lower montane coniferous forest and chaparral, as well as grassland, cismontane woodland, and broad-leaved upland forest, at elevations ranging from 730-2,195 meters (2,395-7,201 feet); blooming period Jun-Oct.	No	Moderate	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present.
Monardella nana ssp. *leptosiphon* San Felipe monardella	USFS List: Se CNDDB: SP CNPS List: 1B Cnty of SD List: A	Native, rhizomatous herb that prefers coniferous woodland, and occurs in chaparral and yellow pine forest, at elevations ranging from 1,200-1,855 meters (3,937-6,086 feet); blooming period Jun-Jul.	No	Moderate	CNDDB records present in the Project Area (CDFG 2009a). Potentially suitable habitat present.
Packera (=*Senecio*) *ganderi* Gander's/ San Diego butterweed	USFS List: Sensitive CESA: SR CNDDB: SP CNPS List: 1B Cnty of SD List: A	Native, perennial herb that prefers the microhabitat in chaparral understory, often beneath chamise, on gabbroic outcrops and following burns, at elevations ranging from 400-1,200 meters (1,312-3,937 feet); blooming period Apr-Jun.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Project Area is generally above the elevation range for this species.
Penstemon clevelandii var. connatus San Jacinto beardtongue	CNDDB: SP CNPS List: 4 Cnty of SD List: D	Pinyon and juniper woodland, Sonoran desert scrub/rocky; elevation 400-1500 meters. Perennial herb, blooms March-May	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Lack of potentially suitable habitat.
Perideridia gairdneri ssp. gairdneri Gairdner's yampah	CNDDB: SP CNPS List: 4 Cnty of SD List: D	Native, perennial herb that grows in broadleaved upland forest, chaparral, coastal prarie, valley and foothill grassland, and vernal pools, at elevations ranging from 0-365 meters (0-1,197 feet); blooming period Jun-Oct.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Project Area is generally above the elevation range for this species.

Scientific Name **Common Name**	**Sensitivity Codes and Status[1, 2]**	**Habitat Preferences/Requirements[3]**	**Verified On-Site**	**Potential To Occur On-Site**	**Factual Basis For Determination Of Occurrence Potential**
Poa atropurpurea San Bernardino blue grass	ESA: FE CNDDB: SP CNPS List: 1B Cnty of SD List: A	Native, rhizomatous herb that occurs on grassy slopes along the edges of wet meadows surrounded by open pine or coniferous forest, at elevations ranging from 1,360-2,455 meters (4,462-8,054 feet); blooming period May-Jul.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Most montane meadow habitat has been excluded from the operation units.
Nasturtium (=Rorippa) gambelii Gambel's water cress	ESA: FE CESA: ST CNDDB: SP CNPS List: 1B Cnty of SD List: A	Native, rhizomatous herb that grows in freshwater and brackish marshes and swamps, at elevations ranging from 5-330 meters (16-1,084 feet); blooming period Apr-Oct.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Project Area is generally above the elevation range for this species.
Rubus glaucifolius var. ganderi Cuyamaca raspberry	CNDDB: SP CNPS List: 1B Cnty of SD List: A	Native/CA endemic, evergreen shrub that typically growth beneath a dense, shaded canopy of lower montane coniferous forest on gabbroic soils, at elevations ranging from 1,200-1,675 meters (3,937-5,495 feet); blooming period May-Jun.	No	Moderate	No CNDDB records in the Project Area (CDFG 2009a). There are inclusions of gabbro soil along the southern corridor of the SR 78/79 portions of the project area.
Rupertia rigida Parish's rupertia/Parish psoralea	CNDDB: SP CNPS List: 4 Cnty of SD List: D	Native, perennial herb that grows on pebble plain in chaparral, cismontane woodland, lower montane coniferous forest, meadows/seeps, and grasslands, at elevations ranging from 700-2,500 meters (2,297-8,202 feet); blooming period Jun-Aug.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Most of the typical habitat of this species is excluded from the operation units.
Saltugilia (=*gilia*) *caruifolia* caraway-leaf gilia/ caraway-leaved gilia/ caraway-leaved woodland-gilia	CNDDB: SP CNPS List: 4 Cnty of SD List: D	Native, annual herb that occurs in sandy openings within lower montane coniferous forest and high desert chaparral, at elevations ranging from 1,400-2,300 meters (4,593-7,546 feet); blooming period May-Aug.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Most of the typical habitat of this species is excluded from the operation units.
Scutellaria bolanderi ssp. *austromontana* Southern (mountains) skullcap	USFS List: Sensitive CNDDB: SP CNPS List: 4 Cnty of SD List: A	Native/CA endemic, small, rhizomatous herb that typically grows on moist embankments of montane creeks or mesic sites in chaparral, oak or pine woodland, and coniferous forest, at elevations ranging from 425-2,000 meters (1,394-6,562 feet); blooming period Jun-Aug.	No	Moderate	CNDDB records present in the Project Area (CDFG 2009a). Potentially suitable habitat present.

Scientific Name **Common Name**	**Sensitivity Codes and Status[1, 2]**	**Habitat Preferences/Requirements[3]**	**Verified On-Site**	**Potential To Occur On-Site**	**Factual Basis For Determination Of Occurrence Potential**
Selaginella asprella Bluish spike-moss	CNDDB: SP CNPS List: 4 Cnty of SD List: D	Native, rhizomatous herb that grows in granitic rock in coniferous forest, and cismontane and pinyon-juniper woodland, at elevations ranging from 1,600-2,700 meters (5,249-8,858 feet); blooming period Jul.	Yes	Present	Identified on APNs 250-020-08, 250-111-08, 250-150-01, and 250-150-16.
Senecio aphanactis California groundsel/ Chaparral/rayless ragwort	CNDDB: SP CNPS List: 2 Cnty of SD List: B	Native, annual herb that grows in open, sage scrub as well as chaparral, cismontane woodland, and alkaline flats, at elevations ranging from 15-800 meters (49-2,624 feet); blooming period Jan-Apr.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Most of the typical habitat of this species is excluded from the operation units.
Streptanthus bernardinus Laguna Mountain jewel-flower	CNDDB: SP CNPS List: 4 Cnty of SD List: D	Native, perennial herb that grows in chaparral and lower montane coniferous forest, at elevations ranging from 670-2,500 meters (2,198-8,202 feet); blooming period May-Aug.	No	Moderate	CNDDB records present in the Project Area (CDFG 2009a). Potentially suitable habitat present.
Streptanthus campestris southern jewel-flower	CNDDB: SP CNPS List: 1B Cnty of SD List: A	Native, perennial herb that grows in chaparral, lower montane coniferous forest, and rocky pinyon and juniper woodland, at elevations ranging from 900-2,300 meters (2,953-7,546 feet); blooming period May-Jul.	No	Moderate	CNDDB records present in the Project Area (CDFG 2009a). Potentially suitable habitat present.
Thermopsis californica var. *semota* Velvety false lupine	USFS List: Sensitive CNDDB: SP CNPS List: 1B Cnty of SD List: A	Native/CA endemic, rhizomatous herb that occurs montane meadows and along the grassy edges of openings in lower montane coniferous forest and cismontane woodland, at elevations ranging from 1,000-1,870 meters (3,281-6,135 feet); blooming period Mar-Jun.	No	Low	CNDDB records present in the Project Area (CDFG 2009a). Most of the typical habitat of this species is excluded from the operation units.
Quercus engelmannii Engelmann oak/ Mesa blue oak	CNDDB: SP CNPS List: 4 Cnty of SD List: D	Native, deciduous tree that occurs in chaparral, cismontane and riparian woodland, and grasslands, at elevations ranging from 50-1,300 meters (164-4,265 feet); blooming period Mar-Jun.	No	Moderate	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present.
Viguiera laciniata San Diego County viguiera (= sunflower)	CNDDB: SP CNPS List: 4 Cnty of SD List: D	Native shrub that typically prefers arid, more open sage scrub and chaparral, at elevations ranging from 60-750 meters (197-2,461 feet); blooming period Feb-Jun(Aug).	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Project Area is generally above the elevation range for this species.

Scientific Name **Common Name**	**Sensitivity Codes and Status[1, 2]**	**Habitat Preferences/Requirements[3]**	**Verified On-Site**	**Potential To Occur On-Site**	**Factual Basis For Determination Of Occurrence Potential**
Viola aurea Golden violet	USFS List: Watch CNDDB: SP CNPS List: 1B Cnty of SD List: B	Native, small, perennial herb that occurs on dry, sandy slopes with Great Basin sagebrush scrub and pinyon-juniper woodland, at elevations ranging from 1,000-2,040 meters (3,281-6,693 feet); blooming period Apr-Jun.	Yes	Present	Identified on APNs 251-150-01 and 250-150-15.

[1]References for Sensitivity Codes and Status: County 1997, Ogden et al. 1998, AMEC 2003a, CDFG 2009, CDFG 2010b-c

[2]California Natural Diversity Database Special Plants/Animals = A general term that refers to all taxa inventoried by the CDFG CNDDB, regardless of their legal or protection status; these taxa include species, subspecies, or varieties that fall into one of the above categories and/or one or more of the following categories: 1) Taxa officially listed or proposed for listing under the federal and/or state ESA; 2) Taxa which meet the criteria for listing, even if not currently included on any list, as described in Section 15380 of the CEQA Guidelines, which may include California Native Plant Society (CNPS) Lists 1 and 2, and some List 3 plants; 3) Bureau of Land Management (BLM), U.S. Fish and Wildlife Service (USFWS), or U.S. Forest Service (USFS) Sensitive (S) Species; 4) Taxa considered SSC by the CDFG; 5) Taxa listed by the CNPS; 6) Taxa that are biologically rare, very restricted in distribution, declining throughout their range but are not currently threatened with extripation, or have a critical, vulnerable stage in their life cycle that warrants monitoring; 7) Populations in California that may be peripheral to the major portion of a taxon's range, but are threatened with extirpation in California; 8) Taxa closely associated with a habitat that is declining in California at an alarming rate (e.g., wetlands, riparian, old growth forests, desert aquatic systems, native grasslands, valley shrubland habitats, vernal pools, etc.); and 8) In addition to the above taxa, those taxa designated as a special status, sensitive, or declining species by other state or federal agencies, or non-governmental organization (NGO) [e.g., The World Conservation Union (IUCN) Conservation Dependent (CD), Critically Endangered (CR), Data Deficient (DD), Endangered (EN), Least Concern (LC), Near Threatened (NT), Vulnerable (V) species; California Department of Forestry and Fire Protection (CDF) Sensitive (S) species].

[3]References for Habitat Preferences/Requirements: (plants) Reiser 2001, County 2009, CNPS 2010.

REFERENCES

AMEC Earth & Environmental, Inc., Conservation Biology Institute, Onaka Planning & Economics, and The Rick Alexander Company. 2003a. Volume I, Final MHCP Plan. Prepared for the Multiple Habitat Conservation Program. Administered by SANDAG for the Cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista. 9 Sections + Attachments A and B.

California Department of Fish and Game (CDFG). 2010a Jan. State and Federally Listed Endangered & Threatened Animals of California [Internet]. Natural Diversity Database. 16 pp. Available from: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/TEAnimals.pdf.

_____. 2010b Apr. Special Vascular Plants, Bryophytes, and Lichens List [Internet]. Natural Diversity Database. Quarterly publication. 71 pp. Available from: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/SPPlants.pdf.

_____. 2010c Apr. State and Federally Listed Endangered & Threatened Plants of California [Internet]. Natural Diversity Database. 16 pp. Available from: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/TEAnimals.pdf.

California Native Plant Society (CNPS). 2010. Inventory of Rare and Endangered Plants (on-line edition, v7-10a) [Internet]. California Native Plant Society. Sacramento, CA. Available from: http://www.cnps.org/inventory.

County of San Diego. 1997. South County MSCP Subarea Plan. 4 Sections + appendices. Prepared in conjunction with the U.S. Fish and Wildlife Service and California Department of Fish and Game. Available from: http://dplu-mscp.sdcounty.ca.gov//4_sub_ar_pl/4_sbarpl.html.

_____. 2009. Sensitive Plant and Animal Lists [Internet]. Available from County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements [for] Biological Resources, Third Revision (Tables 2 and 3): http://www.sdcounty.ca.gov/dplu/docs/Biological_Guidelines.pdf.

Reiser CH. 2001 February. Rare Plants of San Diego County. Aquafir Press. 2001 edition. 299 pp.

APPENDIX 8. OCCURRENCE POTENTIAL OF SPECIAL STATUS ANIMAL SPECIES

Key to abbreviations:

Federal Endangered Species Act (ESA)
FE = Federally-listed as Endangered
FT = Federally-listed as Threatened
FPE = Federally proposed for listing as Endangered
FPT = Federally proposed for listing as Threatened
FPD = Federally proposed for delisting
FC = Federal candidate species
SC = Species of concern
Delisted species are monitored for 5 years

California Endangered Species Act (CESA)
SE = State-listed as Endangered
ST = State-listed as Threatened
SCE = State candidate for listing as Endangered
SCT = State candidate for listing as Threatened
SCD = State candidate for de-listing
SR = California Rare Species

California Natural Diversity Database (CNDDB)
SA = Special Animal

U.S. Forest Service (USFS)
S = Sensitive

California Department of Fish and Game (DFG)
SSC = Species of Special Concern
FP = California fully protected species
WL = Watch List

Multiple Species/Habitat Conservation Program (MSCP)/(MHCP)
NE = Narrow Endemic
CS = Covered Species
CP = Critical Population

County of San Diego
Animal Group 1 = Animals rare, threatened or endangered in California and elsewhere
Animal Group 2 = Animals rare, threatened or endangered in California but more common elsewhere

Scientific Name Common Name	Sensitivity Codes and Status[1]	Habitat Preferences/Requirements[2]	Verified	Potential To Occur	Factual Basis For Determination of Occurrence Potential
INVERTEBRATES					
Helminthoglypta traski coelata Peninsular Range shoulderband snail	Cnty of SD Group: 2	Occurs in sandy soils in coastal dunes and sage scrub communities.	No	Low	No CNDDB records in the Project area (CDFG 2009a). Lack of potentially suitable habitat.
Papilio multiculdata Two-tailed swallowtail	Cnty of SD Group: 1	Found in wooded areas, especially canyons and ravines near watercourses, but also in more urban areas. Host plants include chokecherry and ash trees. One adult flight season, May-Aug.	No	Moderate	No CNDDB records in the Project Area (CDFG 2009a). Potential habitat is present throughout the Project area.
Plebejus saepiolis hilda Hilda blue	Cnty of SD Group: 1	Found in moist meadows, mainly in the mountains up to and above treeline, but also down to sea level along the coast in boggy areas in sagebrush.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present adjacent to some operation units.
Pyrgus ruralis lagunae Laguna Mountains skipper	ESA: FE CNDDB: SA Cnty of SD Group: 1	Found in montane meadows where it's host plant, *Horkelia clevelandii*, is present. *Potentilla glandulosa* may be a potential secondary host plant. Adults prefer some bare ground and open vegetation for nectaring. Two adult flight seasons, Apr-May and Jun-Jul.	No	Low	No CNDDB or USFWS or records in the Project Area (CDFG 2009 and USFWS 2010a). Potentially suitable habitat present adjacent to some operation units.

Scientific Name Common Name	Sensitivity Codes and Status[1]	Habitat Preferences/Requirements[2]	Verified	Potential To Occur	Factual Basis For Determination of Occurrence Potential
FISH					
Oncorhynchus mykiss irideus southern steelhead (=rainbow trout)	ESA: FE CDFG: SSC CNDDB: SA Cnty of SD Group: 1	Inhabits cool, clear, fast-flowing streams and rivers where there are more riffles than pools, and prefer abundant cover.	No	Low	No CNDDB or USFWS or records in the Project Area (CDFG 2009 and USFWS 2010a). Lack of potentially suitable habitat.
AMPHIBIANS					
Bufo microscaphus Arroyo toad	ESA: FE DFG: SSC CNDDB: SA Cnty of SD Group: 1	Utilizes both perennial and intermittent rivers and streams with shallow, slow-moving water in sandy to gravelly pools for breeding, adjacent to sand or fine gravel terraces for aestivation.	No	Low	No CNDDB or USFWS or records in the Project Area (CDFG 2009 and USFWS 2010a). Lack of potentially suitable habitat.
Ensatina klauberi Large-blotched ensatina/ salamander	DFG: SSC CNDDB: SA Cnty of SD Group: 1	Occurs in oak woodlands, mixed coniferous forests, and chaparral habitats, and is associated with edge habitat between dense and sparse vegetation containing moist microhabitat (i.e., near streams) and downed logs, leaf litter, and woody debris.	No	Moderate	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present.
Rana draytonii California red-legged frog	ESA: FT DFG: SSC CNDDB: SA Cnty of SD Group: 1	Utilizes quiet permanent stream pools, marshes, and ponds.	No	Low	No CNDDB or USFWS or records in the Project Area (CDFG 2009 and USFWS 2010a). Potentially suitable habitat present.

Scientific Name Common Name	Sensitivity Codes and Status[1]	Habitat Preferences/Requirements[2]	Verified	Potential To Occur	Factual Basis For Determination of Occurrence Potential
Rana muscosa Sierra Madre (=mountain) yellow-legged frog	ESA: FE (San Gabriel, San Jacinto, & San Bernardino Mtns. only) DFG: SSC CNDDB: SA Cnty of SD Group: 1	Occurs in ponds, tarns, lakes, and streams at moderate to high elevations, and in open stream and lake margins sloping up to a depth of 5 to 8 centimeters.	No	Moderate	No CNDDB or USFWS or records in the Project Area (CDFG 2009 and USFWS 2010a). Potentially suitable habitat present.
Taricha torosa torosa coast range newt	DFG: SSC CNDDB: SA Cnty of SD Group: 2	Breeds in ponds, reservoirs and slow-moving streams.	No	Moderate	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present.
REPTILES					
Aspidoscelis hyperythra beldingi orange-throated whiptail	DFG: SSC CNDDB: SA Cnty of SD Group: 2	Diurnal reptile from early spring to late summer that prefers washes and other sandy areas with patches of brush and rocks in coastal scrub and chaparral.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Project Area is generally above the elevation range for this species.
Coleonyx variegates abbotti San Diego banded gecko	CNDDB: SA Cnty of SD Group: 1	Primarily nocturnal reptile that prefers areas of rock outcrop within sage scrub and chaparral, and hides in burrows or under surface objects during the day, breeding generally Apr-May, and hibernating through the winter, generally from Nov-Feb.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Project Area is generally above the elevation range for this species.

Scientific Name Common Name	Sensitivity Codes and Status[1]	Habitat Preferences/Requirements[2]	Verified	Potential To Occur	Factual Basis For Determination of Occurrence Potential
Lampropeltis zonata pulchra San Diego mountain kingsnake	USFS List: Sensitive DFG: SSC CNDDB: SA Cnty of SD Group: 2	Occurs in relatively open stands of pine and oak trees, as well as foothill canyons, riparian woodlands and mesic oak woodlands, with rocky outcrops or downed logs.	No	High	CNDDB records present within Project Area (CDFG 2009a). Potentially suitable habitat present.
Diadophis punctatus similis San Diego ringneck snake	CNDDB: SA Cnty of SD Group: 2	Occurs in woodlands, grassland, chaparral, mixed conifer forest and riparian habitats, and is associated with open, relatively rocky areas containing moist microhabitats with prey (e.g., frogs, salamanders, etc.) and abundant shelter (e.g., leaf litter, rotting logs, woodpiles, flat rocks, small holes in the ground, etc.).	No	Moderate	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present.
Lichanura (=*Charina*) *trivirgata* roseofusca Coastal rosy boa	USFS List: Sensitive CNDDB: SA Cnty of SD Group: 2	Primarily nocturnal snake occurs in coastal sage scrub and chaparral-dominated communities that contain large rocks and boulders for cover and refuge, often near permanent or intermittent streams.	No	Moderate	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present.

Scientific Name Common Name	**Sensitivity Codes and Status[1]**	**Habitat Preferences/Requirements[2]**	**Verified**	**Potential To Occur**	**Factual Basis For Determination of Occurrence Potential**
Phrynosoma coronatum (*blainvillii*) Coast (San Diego) horned lizard	USFS: Sensitive DFG: SSC CNDDB: SA Cnty of SD Group: 2	Diurnal lizard occurs in a variety of habitats, including coastal sage scrub, chaparral, grassland, coniferous forest, oak woodland, riparian, and the margins of higher elevation desert, with an abundance of open areas for basking and obtaining prey (i.e., native ants and insects), and loose, fine soils that provide camouflage and allow burrowing for protection from predators.	No	Moderate	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present.
Salvadora hexalepis virgultea Coast patch-nosed snake	DFG: SSC CNDDB: SA Cnty of SD Group: 2	Diurnal snake prefers coastal sage and chaparral habitats with low shrub structure of medium density. Habitat selection is closely related to the presence of the species' primary prey, whiptail lizards (*Cnemidophorus* spp.), and the presence of refuge and burrow sites for overwintering, which generally occurs between Oct-Mar.	No	Moderate	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present.
Thamnophis hammondii two-striped garter snake	DFG: SSC CNDDB: SA Cnty of SD Group: 1	Associated with semi-permanent and permanent bodies of water in a variety of habitats, and requires a relatively dense riparian border.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Lack of potentially suitable habitat.

Scientific Name Common Name	Sensitivity Codes and Status[1]	Habitat Preferences/Requirements[2]	Verified	Potential To Occur	Factual Basis For Determination of Occurrence Potential
Thamnophis sirtalis ssp. south coast garter snake	DFG: SSC CNDDB: SA Cnty of SD Group: 1	Utilizes marsh and upland habitat near permanent water with a good riparian buffer.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Lack of potentially suitable habitat.
BIRDS					
Accipiter striatus Sharp-shinned hawk	CNDDB: SA Cnty of SD Group: 1	Winter resident only in southern California that prefers riparian habitats and forages in openings at habitat edges.	No	Moderate	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present.
Agelaius tricolor Tricolored blackbird	DFG: SSC CNDDB: SA Cnty of SD Group: 1	Feeds in grasslands and croplands, and breeds near freshwater preferably in marshes or other emergent wetlands.	No	Moderate	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present.
Aimophila ruficeps canescens Southern California rufous-crowned sparrow	CNDDB: SA Cnty of SD Group: 1	Yearlong resident that occurs in sparse, mixed chaparral and sage scrub habitats, often on steep, rocky hillsides with grass and forb patches and grassly slopes if rock outcrops are present.	No	Moderate	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present.
Ammodramus savannarum Grasshopper sparrow	CDFG: SSC CNDDB: SA Cnty of SD Group: 1	Summer and breeding resident, at elevations up to 1,500 meters (5,000 feet), that utilizes dense, dry or well-drained grassland, especially native grassland with a mix of grasses and forbs for foraging and nesting.	No	Moderate	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present.

Scientific Name Common Name	Sensitivity Codes and Status[1]	Habitat Preferences/Requirements[2]	Verified	Potential To Occur	Factual Basis For Determination of Occurrence Potential
Amphispiza belli belli Bell's sage sparrow	CNDDB: SA Cnty of SD Group: 1	Yearlong resident in western San Diego County that breeds in fairly dense chaparral and desert scrub habitats.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Very limited potentially suitable habitat.
Ardea herodias great blue heron	CNDDB[4]: SA Cnty of SD Group: 2	Yearlong resident throughout most of California, except for the deserts; occurs in shallow estuaries and fresh and saline emergent wetlands, and less commonly along riverine and rocky marine shores, in croplands, pastures, and in mountains above foothills; perches and roosts in secluded tall trees, and prefers nesting in secluded groves of tall trees near shallow-water feeding areas; stands motionless, or walks slowly, when searching for prey in shallow water; feeds primarily on fish, but may also eat small rodents, amphibians, snakes, lizards, insects, crustaceans, and occasionally small birds; usually arrives on breeding grounds in Feb.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Lack of typical breeding habitat.

Scientific Name Common Name	Sensitivity Codes and Status[1]	Habitat Preferences/Requirements[2]	Verified	Potential To Occur	Factual Basis For Determination of Occurrence Potential
Aquila chrysaetos Golden eagle	DFG: SSC, FP CNDDB: SA Cnty of SD Group: 1	Yearlong resident that nests primarily on cliffs, typically 3–30 meters (10–100 feet) above the ground, during the breeding season generally from early Feb-Jul, near open habitats, such as grasslands, oak savannas, and open shrublands, for foraging.	No	Moderate	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present.
Buteo lineatus Red-shouldered hawk	Cnty of SD Group: 1	Occurs in dense riparian areas with adjacent edges and open areas for hunting.	Yes	Present	Generally occurs throughout Project Area.
Buteo regalis Ferruginous hawk	CNDDB: SA Cnty of SD Group: 1	Occurs in dry, open habitats (typically grasslands).	No	Moderate	CNDDB records present in the Project Area (CDFG 2009a). Potentially suitable habitat present.

Scientific Name Common Name	Sensitivity Codes and Status[1]	Habitat Preferences/Requirements[2]	Verified	Potential To Occur	Factual Basis For Determination of Occurrence Potential
Cathartes aura turkey vulture	Cnty of SD Group: 1	Yearlong resident that uses extensive open areas with protective roost sites provided by large trees, snags, thickets, shrubs, and nest sites in the crevices of rock outcrops. Nesting locations are difficult to detect because they typically lay their eggs on bare ground, with little or no construction of an actual nest. Hunts from the air or by perch, aided by the sense of smell, and feeds primarily on carrion.	Yes	Present	Generally occurs throughout Project Area.
Charadrius montanus mountain plover	DFG: SSC CNDDB[5]: SA MSCP: CS Cnty of SD Group: 2	Winter visitor to the San Diego County area that utilizes fields of bare, plowed dirt.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Limited potentially suitable habitat present.
Circus cyaneus Northern harrier	DFG: SSC CNDDB: SA Cnty of SD Group: 1	Yearlong and winter resident in California that uses flat, or hummocky, open areas of tall, dense grasses, moist or dry shrubs, and edges for nesting, cover, and feeding; breeds Apr-Sep, with peak activity Jun-Jul.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Limited potentially suitable habitat present.

Scientific Name **Common Name**	**Sensitivity** **Codes and Status**[1]	**Habitat** **Preferences/Requirements**[2]	**Verified**	**Potential** **To Occur**	**Factual Basis** **For Determination of** **Occurrence Potential**
Cypseloides niger black swift	DFG: SSC CNDDB[4]: SA Cnty of SD Group: 2	Forages over almost any terrain or habitat; nests in moist crevices or caves on sea cliffs or cliffs near waterfalls in deep canyons.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present but species rare within San Diego County.
Dendroica petechia brewsteri Yellow warbler	DFG: SSC CNDDB: SA Cnty of SD Group: 2	Breed in southern California, in riparian woodlands in the lowlands and foothill canyons, and typically occur in riparian forests that contain cottonwoods, sycamores, willows, or alders.	No	Moderate	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present
Elanus leucurus (= *caeruleus*) White (= black)-shouldered kite	DFG: FP CNDDB: SA Cnty of SD Group: 1	Yearlong resident throughout most of California that frequents open habitats with sparse shrubs and trees, other suitable perches, bare ground, and low or sparse herbaceous cover.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Limited potentially suitable habitat present.

Scientific Name **Common Name**	**Sensitivity** **Codes and Status**[1]	**Habitat** **Preferences/Requirements**[2]	**Verified**	**Potential** **To Occur**	**Factual Basis** **For Determination of** **Occurrence Potential**
Empidonax traillii extimus Southwestern willow flycatcher	ESA: FE CESA: SE CNDDB: SA Cnty of SD Group: 1	Riparian obligate during the breeding season, and primarily occurs in densely vegetated riparian habitats, preferring streamside associations of cottonwood (*Populus* spp.), willow (*Salix* spp.), alder (*Alnus* spp.) and other riparian vegetation, constructing their nests in horizontal forks or branches above the ground or water in trees or shrubs, usually with dense vegetation providing a canopy over the nest.	No	Low	No CNDDB or USFWS or records in the Project Area (CDFG 2009 and USFWS 2010a). Lack of typical habitat.
Eremophila alpestris actia California horned lark	CNDDB: SA Cnty of SD Group: 2	Occurs in grasslands, disturbed areas and open habitats with sparse, low vegetation.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Limited potentially suitable habitat present.
Grus canadensis tabida greater sandhill crane	CESA: ST DFG: FP CNDDB: SA Cnty of SD Group: 2	Uncommon in San Diego County, utilizes wet meadows, shallow wetlands, and agricultural lands.	No	Low	No CNDDB or USFWS or records in the Project Area (CDFG 2009 and USFWS 2010a). Lack of potentially suitable habitat.

Scientific Name Common Name	Sensitivity Codes and Status[1]	Habitat Preferences/Requirements[2]	Verified	Potential To Occur	Factual Basis For Determination of Occurrence Potential
Haliaeetus leucocephalus Bald eagle	ESA: Delisted CESA: SE DFG: FP CNDDB: SA Cnty of SD Group: 1	Tends to utilize mixed conifer forest for wintering activities (i.e., foraging, perching, and roosting) adjacent to lakes that provide an abundance of prey (i.e., fish or waterbird prey).	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat surrounding Cuyamaca Reservoir, but species not observer.
Icteria virens Yellow-breasted chat	DFG: SSC CNDDB: SA Cnty of SD Group: 1	Breed in southern California, in dense riparian thickets and brushy tangles in the vicinity of watercourses, primarily in the coastal lowlands, and appear to be closely tied to streamside thickets of willows, mesquite, and mulefat with tangles of grapevines and other riparian species, and prefer patches with a high density of blackberry vines.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Lack of potentially suitable habitat.
Junco hyemalis caniceps Gray-headed junco	CNDDB: SA Cnty of SD Group: 2	Rare visitor to San Diego County; occurs in coastal lowlands, foothills, mountains and desert edge zones; parks or areas with open ground or short grass under or near tall tress, and coniferous or live oak woodlands.	No	Moderate	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present.

Scientific Name **Common Name**	**Sensitivity** **Codes and Status**[1]	**Habitat** **Preferences/Requirements**[2]	**Verified**	**Potential** **To Occur**	**Factual Basis** **For Determination of** **Occurrence Potential**
Lanius ludovicianus Loggerhead shrike	DFG: SSC CNDDB: SA Cnty of SD Group: 1	Common resident and winter visitor to California that occurs in dry, open habitats with sparse vegetation, including grasslands, pastures, agricultural fields, and orchards, and commonly uses posts, fences, and utility lines as perches.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Limited potentially suitable habitat present.
Larus californicus California gull	DFG: SSC CNDDB: SA Cnty of SD Group: 2	Occurs in open ocean, beaches, bays, estuaries, lagoons, as well as garbage dumps, agricultural fields, and freshwater ponds and lakes.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Limited potentially suitable habitat present.
Melanerpes lewis Lewis' woodpecker	CNDDB: SA Cnty of SD Group: 1	Occurs in open oak savannah, broken deciduous and coniferous habitats.	No	Moderate	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present.
Oreortyx pictus mountain quail	Cnty of SD Group: 2	On steep slopes with thickets in chaparral, open brushy stands of conifer and deciduous forests, as well as desert edge scrub	Yes	Present	Generally occurs throughout Project Area.

Scientific Name Common Name	Sensitivity Codes and Status[1]	Habitat Preferences/Requirements[2]	Verified	Potential To Occur	Factual Basis For Determination of Occurrence Potential
**Pandion haliaetus* Osprey	CNDDB: SA Cnty of SD Group: 1	Globally distributed and breeds in North America, but is an uncommon winter visitor to southern California; associated with salt or fresh water, and occurs in habitats near lakes and reservoirs, rivers, ponds, shorelines with cliffs, sheltered bays, estuaries, brackish coastal lagoons, wooded swamps with open water, and canals.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Limited potentially suitable habitat present.
Polioptila californica California gnatcatcher	ESA: FT DFG: SSC CNDDB: SA Cnty of SD Group: 1	Yearlong resident in coastal southern California, that occurs in low, dense sage scrub habitat in arid washes, on mesas, and on slopes of coastal hills, generally below 500 meters (1,500 feet); *Eriogonum fasciculatum* var. *fasciculatum*, *Artemisia californica*, and patches of *Opuntia littoralis* are particularly favored; peak egg laying in Apr-May, with fledging occurring at 9-10 days.	No	Low	No CNDDB or USFWS or records in the Project Area (CDFG 2009 and USFWS 2010a). Lack of potentially suitable habitat and generally above the elevation range of this species.

Scientific Name Common Name	Sensitivity Codes and Status[1]	Habitat Preferences/Requirements[2]	Verified	Potential To Occur	Factual Basis For Determination of Occurrence Potential
Progne subis Purple martin	DFG: SSC CNDDB: SA Cnty of SD Group: 1	Breeds in North America, and occurs in relatively open montane forest, woodlands, and riparian areas, often near water bodies, and is generally restricted to areas with dead snags containing old woodpecker cavities for nesting.	Yes	Present	Identified on APN 294-012-20.
Sialia mexicana western bluebird	MSCP: CS MHCP: CS Cnty of SD Group: 2	Open woodlands, farmlands, and orchards	Yes	Present	Generally occurs throughout Project Area.
Strix occidentalis occidentalis California spotted owl	USFS: Sensitive DFG: SSC CNDDB: SA Cnty of SD Group: 1	Primarily nocturnal, forest dwelling bird that occurs in old growth riparian/hardwood forest, live oak/bigcone Douglas-fir forest, mixed conifer forest, and redwood/California laurel forest, and is strongly associated with forests that have a complex multi-layered structure, large-diameter trees, and high canopy closure; breeds generally from early Apr-Jun, and nest sites are typically in a natural tree cavity, broken treetop, or abandoned nest of another large bird species, unlined or composed of material ready present, at 9 to 55 meters (30 to 180 feet) above ground.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present.

Scientific Name Common Name	Sensitivity Codes and Status[1]	Habitat Preferences/Requirements[2]	Verified	Potential To Occur	Factual Basis For Determination of Occurrence Potential
Vireo bellii pusillus Least Bell's vireo	ESA: FE CESA: SE CNDDB: SA Cnty of SD Group: 1	Obligate low-elevation riparian species that inhabits dense, willow-dominated riparian habitats with lush inderstory vegetation in the immediate vicinity of watercourses.	No	Low	No CNDDB or USFWS or records in the Project Area (CDFG 2009 and USFWS 2010a). Lack of typical habitat.
Vireo vicinior gray vireo	DFG: SSC CNDDB[4]: SA Cnty of SD Group: 1	Utilizes dense chaparral dominated by chamise and *Ceanothus* sp. at elevations ranging from 1,100-1,520 meters (3,609-3,779).	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present, but generally above the elevation range of this species.
MAMMALS					
Antrozous pallidus Pallid bat	DFG: SSC CNDDB: SA Cnty of SD Group: 2	Nocturnal bat species that is a yearlong resident throughout California and occurs in a wide variety of habitats, including grasslands, shrublands, woodlands, and forests, but prefers rocky outcrops, cliffs, and crevices with access to open habitats for foraging, may forage up to 2.5 kilometers (3 miles) from day roost.	No	Moderate	CNDDB records present in the Project Area (CDFG 2009a). Potentially suitable habitat present.

Scientific Name Common Name	Sensitivity Codes and Status[1]	Habitat Preferences/Requirements[2]	Verified	Potential To Occur	Factual Basis For Determination of Occurrence Potential
Bassariscus astutus Ringtail	Cnty of SD Group: 2	Nocturnal mammal of the raccoon family that is a yearlong resident throughout most of California and utilizes a mixture of forest and shrubland in close association with rocky areas or riparian habitats; usually not found more than 1 kilometer (0.6 miles) from permanent water; nests in rock recesses, hollow trees, logs, snags, abandoned burrows, or woodrat nests, with young reportedly born in May-Jun.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present.
Chaetodipus californicus femoralis Dulzura (California) pocket mouse	DFG: SSC CNDDB: SA Cnty of SD Group: 2	Nocturnal species that occurs in a variety of habitats, including coastal scrub, chaparral and grasslands, typically in brushy areas along grass-chaparral edge.	No	Moderate	CNDDB records present in the Project Area (CDFG 2009a). Potentially suitable habitat present.
Chaetodipus fallax fallax Northwestern San Diego pocket mouse	DFG: SSC CNDDB: SA Cnty of SD Group: 2	Nocturnal species that occurs in a variety of habitats, including coastal scrub, chaparral and grasslands, typically in brushy areas along grass-chaparral edge.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present.
Corynorhinus townsendii Townsend's western big-eared bat	DFG: SSC CNDDB: SA Cnty of SD Group: 2	Nocturnal species that prefers mesic habitats where it can forage along habitat edge. Roosts in caves, tunnels, mines and buildings.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present.

Scientific Name Common Name	Sensitivity Codes and Status[1]	Habitat Preferences/Requirements[2]	Verified	Potential To Occur	Factual Basis For Determination of Occurrence Potential
Dipodomys stephensi Stephens' kangaroo rat	ESA: FE CESA: ST CNDDB: SA Cnty of SD Group: 1	Inhabits sparse grassland, and sometimes sage scrub habitats in areas with penetrable soils and flat to moderately sloping topography, including the base of hillsides, flat areas along ridgetops, sandy washes, and open fields, and requires low percentages of vegetative cover with large areas of bare ground.	No	Low	No CNDDB or USFWS or records in the Project Area (CDFG 2009 and USFWS 2010a). Lack of typical habitat.
Euderma maculatum Spotted bat	DFG: SSC CNDDB: SA Cnty of SD Group: 2	Occur in a variety of habitats ranging from below sea level desert, sagebrush, montane forests and up to high-elevation coniferous forests, and forage in forest openings, pinyon juniper woodlands, large riverine/riparian habitats, and riparian habitat associated with small to mid-sized streams in narrow canyons, wetlands, meadows, and old agricultural fields; closely associated with high rock cliffs with suitable crevices for roosting.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present.

Scientific Name Common Name	Sensitivity Codes and Status[1]	Habitat Preferences/Requirements[2]	Verified	Potential To Occur	Factual Basis For Determination of Occurrence Potential
Eumops perotis californicus (Greater) western mastiff bat	CNDDB: SA Cnty of SD Group: 2	Nocturnal bat species that occurs in many open, semi-arid to arid habitats, including woodlands, coastal scrub, grasslands, chaparral, desert scrub, and urban areas; roosts in crevices in vertical cliff faces, high buildings, trees, and tunnels.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present.
Lasiurus blossevillii Western red bat	USFS List: Sensitive DFG: SSC CNDDB: SA Cnty of SD Group: 2	Associated with large deciduous trees in riparian habitat, often in streamside habitats dominated by cottonwood, oaks, sycamore, and walnut.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Lack of typical habitat.
Lepus californicus bennettii San Diego black-tailed jackrabbit	DFG: SSC CNDDB: SA Cnty of SD Group: 2	Diurnal and crepuscular herbivore that occurs in herbaceous and desert-shrub areas and open, early stages of forest and chaparral habitats.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Lack of typical habitat.

Scientific Name Common Name	Sensitivity Codes and Status[1]	Habitat Preferences/Requirements[2]	Verified	Potential To Occur	Factual Basis For Determination of Occurrence Potential
Myotis ciliolabrum Small-footed myotis	CNDDB: SA Cnty of SD Group: 2	Little is known about the habitat preferences of this nocturnal bat species, but they are known to inhabit rocky areas, and seem to prefer open stands in forests, woodlands, and brushy habitats; requires more water than most other bats; roosts in caves, buildings, crevices and sometimes under bark and bridges, preferring more humid areas; hibernates from Nov-Mar.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present.
Myotis evotis Long-eared myotis	CNDDB: SA Cnty of SD Group: 2	Nocturnal bat species that is found in nearly all brush, woodland, and forest habitats, from sea level to at least 2,700 meters (9,000 feet), but prefers coniferous woodlands and forests; roosts in buildings, crevices, spaces under bark, and snags, and uses caves primarily as night roosts; feeds along habitat edges, in open habitats, and over water, and takes a variety of arthropods, particularly beetles; hibernates.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present.

Scientific Name **Common Name**	**Sensitivity** **Codes and Status**[1]	**Habitat** **Preferences/Requirements**[2]	**Verified**	**Potential** **To Occur**	**Factual Basis** **For Determination of** **Occurrence Potential**
Myotis thysanodes Fringed myotis	CNDDB: SA Cnty of SD Group: 2	Nocturnal bat species that is found in a variety of habitats, but seems to prefer pinyon-juniper, valley foothill hardwood and hardwood-conifer, generally at 1300-2200 meters (4000-7000 feet); roosts in caves, mines, buildings, and crevices, and may use separate day and night roosts; forages over water, in open habitats and early successional stages, streams, lakes, and ponds, by gleaning from foliage, and takes mostly beetles, as well as moths, arachnids, and orthopterans; hibernates from Oct-Mar.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present.

Scientific Name Common Name	**Sensitivity Codes and Status[1]**	**Habitat Preferences/Requirements[2]**	**Verified**	**Potential To Occur**	**Factual Basis For Determination of Occurrence Potential**
Myotis volans Long-legged myotis	CNDDB: SA Cnty of SD Group: 2	Nocturnal bat species that is typically found in woodland and forest habitats above 1200 meters (4,000 feet), and also forages in chaparral, coastal scrub, Great Basin shrub habitats, and in early successional stages of woodlands and forests; not typically found in desert and arid grassland habitats; roosts in rock crevices, buildings, under tree bark, in snags, mines, and caves, and may use separate day and night roosts; forages at fairly low heights 3-5 meters (10-15 feet) over water, close to trees and cliffs, and in openings in woodlands and forests; takes flying insects, primarily moths; hibernates.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present.

Scientific Name Common Name	**Sensitivity Codes and Status[1]**	**Habitat Preferences/Requirements[2]**	**Verified**	**Potential To Occur**	**Factual Basis For Determination of Occurrence Potential**
Myotis yumanensis Yuma myotis	CNDDB: SA Cnty of SD Group: 2	Nocturnal bat species that is found in a wide variety of habitats ranging from sea level to 3300 meters (11,000 feet), and prefers open forests and woodlands with sources of water over which to feed; roosts in buildings, mines, caves, or crevices, as well as abandoned swallow nests and under bridges, and uses separate day and night roosts; feeds over water sources on a wide variety of small flying insects found by echolocation; hibernates.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present.

Scientific Name Common Name	Sensitivity Codes and Status[1]	Habitat Preferences/Requirements[2]	Verified	Potential To Occur	Factual Basis For Determination of Occurrence Potential
Neotoma lepida intermedia San Diego desert woodrat	DFG: SSC CNDDB: SA Cnty of SD Group: 2	Mainly nocturnal, but also crepuscular and occasionally diurnal small mammal that is active year-long and prefers coastal scrub or juniper/sagebrush habitat, with moderate to dense canopies, particularly in areas of rock outcrops and rocky cliffs and slopes; nests are constructed of twigs, sticks, cactus parts, and rocks, dependent on the availability of surrounding building materials, and are usually built against a rock crevice or in the lower branches of trees; prefers to eat the buds, fruits, seeds, bark, leaves, and young shoots of live oak, chamise, and buckwheat, and is dependent on prickly pear for water balance in desert habitats.	No	Moderate	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present.
Nyctinomops femorosaccus pocketed free-tailed bat	DFG: SSC CNDDB: SA Cnty of SD Group: 2	Nocturnal species that occurs in woodlands, and desert scrub, riparian, wash, alkali scrub habitats, and prefers rock crevices in cliffs for roosting.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Lack of typical habitat.

Scientific Name Common Name	Sensitivity Codes and Status[1]	Habitat Preferences/Requirements[2]	Verified	Potential To Occur	Factual Basis For Determination of Occurrence Potential
Nyctinomops macrotis big free-tailed bat	CNDDB: SA DFG: SSC Cnty of SD Group: 2	Nocturnal species that prefers rugged, rocky canyons but has been found in urban areas; roosts in buildings, caves, and occasionally holes in trees, and feeds primarily on large moths.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Lack of typical habitat.
Odocoileus hemionus fuliginata southern mule deer	MSCP: CS MHCP: CS Cnty of SD Group: 2	Typically crepuscular species, but may be active during the day or night, that occurs in early to intermediate successional stages of most forest, woodland, and brush habitats, but prefers a mosaic of various-aged vegetation that provides woody cover, meadow and shrubby openings, and free water.	Yes	Present	Generally occurs throughout Project Area.
Onychomys torridus ramona Southern grasshopper mouse	DFG: SSC CNDDB: SA Cnty of SD Group: 2	Occurs in a variety of habitats, including grasslands, sage scrub and chaparral, where friable soils are present.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present.
Perognathus longimembris brevinasus Los Angeles little pocket mouse	USFS List: Sensitive DFG: SSC CNDDB: SA Cnty of SD Group: 2	Occupies areas with fine, sandy soils, typically in arid grassland or coastal sage scrub habitats, and require soils that allow them to construct burrows 2-3 feet deep for escape from the desert heat and predators.	No	Low	No CNDDB records in the Project Area (CDFG 2009a). Lack of typical habitat.

Scientific Name Common Name	Sensitivity Codes and Status[1]	Habitat Preferences/Requirements[2]	Verified	Potential To Occur	Factual Basis For Determination of Occurrence Potential
Puma (=*Felis*) *concolor* Mountain lion	Cnty of SD Group: 2	Mostly nocturnal and crepuscular large mammal that occurs throughout California and typically requires extensive areas of riparian vegetation and brushy stages of various habitats, with interspersions of irregular terrain, rocky outcrops, and tree/brush edges, where prey, predominantly consisting of mule deer, are present; active yearlong, but has season movement during the fall within a fixed range in response to migrating deer herds (generally Aug-Oct).	Yes	Present	Potential range would generally include Project Area.
Taxidea taxus American badger	DFG: SSC CNDDB: SA Cnty of SD Group: 2	Nocturnal and diurnal carnivore that is most abundant in drier open stages of most shrub, forest, and herbaceous habitats with friable soils for digging burrows for cover.	No	Med	No CNDDB records in the Project Area (CDFG 2009a). Potentially suitable habitat present.

[1]References for Sensitivity Codes and Status: County 1997, Ogden et al. 1998, AMEC 2003a, CDFG 2009, CDFG 2010b-c

[2]California Natural Diversity Database Special Animals = A general term that refers to all taxa inventoried by the CDFG CNDDB, regardless of their legal or protection status; these taxa include species, subspecies, or varieties that fall into one of the above categories and/or one or more of the following categories: 1) Taxa officially listed or proposed for listing under the federal and/or state ESA; 2) Taxa which meet the criteria for listing, even if not currently included on any list, as described in Section 15380 of the CEQA Guidelines, 3) Bureau of Land Management (BLM), U.S. Fish and Wildlife Service (USFWS), or U.S. Forest Service (USFS) Sensitive (S) Species; 4) Taxa considered SSC by the CDFG; 5) Taxa listed by the CNPS; 6) Taxa that are biologically rare, very restricted in distribution, declining throughout their range but are not currently threatened with extripation, or have a critical, vulnerable stage in their life cycle that warrants monitoring; 7) Populations in California that may be peripheral to the major portion of a taxon's range, but are threatened with extirpation in California; 8) Taxa closely associated with a habitat that is declining in California at an alarming rate (e.g., wetlands, riparian, old

growth forests, desert aquatic systems, native grasslands, valley shrubland habitats, vernal pools, etc.); and 8) In addition to the above taxa, those taxa designated as a special status, sensitive, or declining species by other state or federal agencies, or non-governmental organization (NGO) [e.g., The World Conservation Union (IUCN) Conservation Dependent (CD), Critically Endangered (CR), Data Deficient (DD), Endangered (EN), Least Concern (LC), Near Threatened (NT), Vulnerable (V) species; California Department of Forestry and Fire Protection (CDF) Sensitive (S) species; National Marine Fisheries Service (NMFS) Species of Concern (SC); American Fisheries Society (AFS) Endangered (EN), Threatened (TH), Vulnerable (VU) species; Xerces Society (XERCES) Critically Imperiled (CI), Data Deficient (DD), Imperiled (IM), Vulnerable (VU) invertebrate species; USFWS Birds of Conservation Concern (BCC); American Bird Conservancy (ABC) U.S. Watch List of Birds of Conservation Concern (WLBCC); Marine Mammal Commission (MMC) Marine Mammal Species of Special Concern (SSC); and The Western Bat Working Group (WBWG) High (H), Low-Medium (LP), Medium (M), Medium-High (MH) Priority species].

[3]References for Habitat Preferences/Requirements: (plants) Reiser 2001, County 2009, CNPS 2010; (butterflies) Faulkner and Klein 2004, Opler 2006; (amphibians and reptiles) Stebbins 2003, CDFG 2010d; (birds) AOU Birds of North America On-line 2010 and CDFG 2010d; (mammals) CDFG 2010d.

[4]CNDDB only tracks the nesting locations of these bird species; the location of the nest or any indication of breeding (i.e., territorial males, adults carrying nest material, adults carrying food, the presence of newly fledged young, etc.) is acceptable evidence of nesting.

[5]CNDDB only tracks the wintering range of these bird species.

REFERENCES

AMEC Earth & Environmental, Inc., Conservation Biology Institute, Onaka Planning & Economics, and The Rick Alexander Company. 2003a. Volume I, Final MHCP Plan. Prepared for the Multiple Habitat Conservation Program. Administered by SANDAG for the Cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista. 9 Sections + Attachments A and B.

California Department of Fish and Game (CDFG). 2009 Jul. Special Animals [Internet]. Natural Diversity Database. 50 pp + Endnotes. Available from: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/SPAnimals.pdf.

_____. 2010a Jan. State and Federally Listed Endangered & Threatened Animals of California [Internet]. Natural Diversity Database. 16 pp. Available from: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/TEAnimals.pdf.

_____. 2010d. Life History Accounts and Range Maps [Internet]. California Wildlife Habitat Relationships System. Edited by Zeiner DC, et al. 1988-1990, updated. Available from: http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx.

County of San Diego. 1997. South County MSCP Subarea Plan. 4 Sections + appendices. Prepared in conjunction with the U.S. Fish and Wildlife Service and California Department of Fish and Game. Available from: http://dplu-mscp.sdcounty.ca.gov//4_sub_ar_pl/4_sbarpl.html.

_____. 2009. Sensitive Plant and Animal Lists [Internet]. Available from County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements [for] Biological Resources, Third Revision (Tables 2 and 3): http://www.sdcounty.ca.gov/dplu/docs/Biological_Guidelines.pdf.

Faulkner D, Klein M. 2004. San Diego's Sensitive Butterflies, A Workshop Focusing on Nine Local Species. 60 pp.

Ogden, in conjunction the Resource Agencies, Local Jurisdictions, and members of environmental, building and development communities [Internet]. 1998. Final Multiple Species Conservation Program MSCP Plan. 8 sections + attachments. Available from: http://dplu-mscp.sdcounty.ca.gov//2_bmo/2FinalMSCPProgramPlan.pdf.

Opler PA, Lotts K., Naberhaus T. coordinators. 2010. Butterflies and Moths of North America [Internet]. Bozeman, MT: Big Sky Institute. Available from: http://www.butterfliesandmoths.org/.

Stebbins, RC. 2003. Peterson Field Guide: Western Reptiles and Amphibians. 3rd Edition.

Unitt P. 2007. San Diego County Bird Atlas Google™ Earth [Internet]. San Diego Natural History Museum. Available from: http://www.sdnhm.org/ge_files/birdatlasguide.pdf.

APPENDIX 9. WATERCOURSE AND LAKE PROTECTION ZONE (WLPZ) BY APN

APN	WLPZ Count	WLPZ Linear Feet
Whispering Pines		
250-020-03	2	1112.9
250-020-07	1	143.0
250-020-08	2	499.1
250-020-10	5	1045.3
250-020-14	1	914.2
250-020-15	1	112.8
250-020-18	2	373.7
250-020-19	12	4900.8
250-080-45	4	2081.2
250-100-02	2	515.7
250-100-06	1	123.1
250-100-13	5	1122.6
250-100-16	8	4081.1
250-100-18	5	2157.5
250-100-19	1	438.1
250-100-25	1	341.3
250-110-35	1	240.0
250-111-04	1	150.4
250-111-05	1	248.2
250-111-06	2	445.8
250-111-07	3	852.2
250-111-08	2	945.0
250-130-15	1	195.7
250-150-01	5	2686.6
250-150-15	1	548.6
250-150-16	6	5956.9
250-170-01	2	1184.4
250-180-19	2	500.0
250-180-20	1	283.1
250-207-07	1	79.8
250-211-25	1	161.4
Subtotal:	**83**	**34440.7**
SR 78/79 Corridor		
248-050-06	2	1141.5
248-050-15	1	338.5
248-160-06	2	185.0
248-160-28	2	329.4
248-180-27	1	656.5
248-190-15	1	392.0
291-072-09	1	46.5
291-170-30	1	12.1
292-011-33	2	783.2
292-041-27	1	116.1
292-041-28	8	3642.9

APN	WLPZ Count	WLPZ Linear Feet
292-042-07	1	178.9
292-042-09	1	83.5
292-042-15	1	695.3
292-042-19	1	57.5
292-054-41	1	105.8
292-054-48	1	35.1
292-054-49	2	254.9
292-055-01	2	427.7
292-055-28	1	16.7
292-057-05	1	104.5
292-140-09	1	13.8
292-140-10	3	492.1
292-140-29	13	7350.6
292-140-30	1	59.7
292-140-41	1	162.1
292-141-06	1	510.9
294-011-55	2	416.7
294-012-21	1	448.4
294-012-25	1	142.8
294-012-28	2	885.9
294-012-29	1	296.3
294-012-32	1	896.8
294-096-01	1	128.6
294-180-01	1	204.3
335-010-29	1	191.3
335-020-06	1	110.0
335-030-09	4	270.1
407-050-08	5	1207.8
407-050-13	13	6621.6
407-051-03	3	1814.4
407-100-36	3	1267.5
407-100-50	5	2008.2
407-121-06	1	48.8
407-121-21	1	18.1
408-080-65	2	716.8
408-081-12	1	145.6
Subtotal:	**104**	**36032.5**
Total:	**187**	**70473.2**